Comfort Inn Marina Towers, Chennai, India
June 12-14, 2009

LEADERSHIP, MARKETING and COMMUNICATIONS, ENTREPRENEURSHIP, SECURITY, NETWORKING STRATEGY and SOCIAL RESPONSIBILITY in India, USA and the World -- Building Competitive Skills

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PROCEEDINGS

First Edition, 2009

Dr. Nabarun Ghose, Editor
The University of Findlay, USA

Padmavathi Dasharatha Yata, Assistant Editor
ICRISAT, INDIA and The University of Findlay, USA

India – USA Global Business and Networking Strategy Conference

Chennai, INDIA
JUNE 12-14, 2009

Program Chair - USA
Dr. Nabarun Ghose
The University of Findlay
Findlay, Ohio, USA

NOTE FROM THE EDITOR

The India-USA Global Business and Networking Strategy Conference 2009 well surpassed the previous year and was a resounding success thanks to the wholehearted contributions of dozens of well-wishers from government, industry, and academia. Congratulations to every contributor! The information shared and the networking opportunities were phenomenal! Participants found the Conference most timely and valuable. A few blind-refereed papers, around 25% of those submitted and presented have been selected for publication in the Proceedings. A photojournalistic coverage of the Conference is included. Paper copies of the Proceedings and individual paper reprints can be obtained for a fee by contacting the editor.

We look forward to your contributions at the India-USA Global Business and Networking Strategy Conference 2010, June 11-13, at Comfort Inn Marina Towers, Chennai, India. Information on Registration and the Call for Papers are provided in this Proceedings and can also be accessed at http://tinyurl.com/yfumllm. Interested participants from South Asia can also get the registration details including rates by contacting the editor or:

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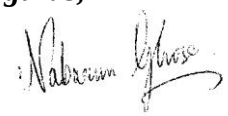
We look forward to your participation and presentation at the India-USA Global Business and Networking Strategy Conference 2010!

Regards,



Dr. Nabarun Ghose
Program Chair – USA

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Wilfred Davidar, IT Secretary, Tamil Nadu, (center) speaker

Dr. Lakshmi Narayanan, Vice Chairman – Cognizant, speaker

Dr. Nabarun Ghose, Professor—Marketing and Business, The University of Findlay, Conference Chair -- USA

Dipankar Ghose, CEO – Prakruthi, Conference Chair -- INDIA

	
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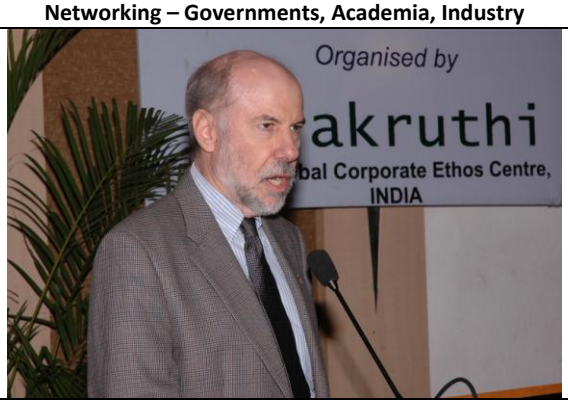	
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Dr. K. Prabhakar, VP -- Corporate HR, Apollo Hospitals, speaker	**D. K. Oza – Former Vice Chancellor of the Gandhigram Rural University, speaker**
	
C.X.Elango, Head -- Skills India Consultants, Clements Institute of Public Research, Analysis and Services, speaker	**Padmavathi Dasaratha Yata – ICRISAT, speaker**
	
Roundtable discussion on national health policy for excerpts to be included in Federation of Indian Chambers of Commerce and Industry report to the Government of India	**Vijay Simha, Chief Operating Officer -- BPL Healthcare (right), demonstrates the latest product, as Dr. J.S. Rajkumar, Chairman – Lifeline Group of Hospitals, speaker, comments**

Vijay Simha, Chief Operating Officer - BPL Healthcare, speaker

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Shamini Katepally, The University of Findlay, speaker

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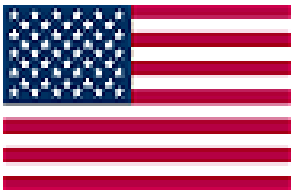
Performers from Konarak Odissi Dance & Art Academy, Chennai, at the Conference Banquet

Delegates at the end of the Conference 2009

GREEN TECHNOLOGIES – SIMPLE INSIGHTS INTO POTENTIAL OF SOLAR ENERGY



Keeron Sreyoshi Ghose
Tiffin Columbian High School, OH, USA

1. ABSTRACT

Energy is a critical concern in the world. The availability, production, distribution and cost of energy have entire nations and the world focusing on addressing the problem. Solar energy has very important advantages. It is renewable, non-polluting and abundant. The most common procedure for converting light into electrical energy is by using a solar cell. However, solar cells are expensive. Therefore different modifications that include reflectors and mirrors are being tried to maximize the energy generation capacities of solar cells. The hypothesis of this study is that solar cells would perform differently based on location. Solar cells used in different combinations with reflectors and mirrors were exposed to sunlight at different times of the day in two locations, one in Tiffin, Ohio, USA (41.1° N 83.2° W, 762 feet above sea level) and one in Kolkata, India (22.6° N 88.4° E, 60 feet above sea level), and the energy generated were recorded. The hypothesis was supported. It was found that reflectors performed better in lower latitude. Solar cells and mirrors performed better in higher latitude. These findings can be explained by a multiple regression analysis of observations that resulted in the following mathematical model:

Energy Generated by Solar Cell = 22.283 - 0.0287(Heat Index) + 1.932(Visibility)
+ 1.870(UV Index) – 1.027(Wind Speed)

Heat Index, Visibility, UV Index, and Wind Speed were recorded in observations. The information from this study is very important in determining whether reflectors and mirrors should or should not be added to solar cells at different locations. It would also provide information for making financial decisions on the feasibility of installing solar cells at various locations for energy generation.

2. LITERATURE

- Background information

Energy is a critical concern in the world. The availability, production, distribution and cost of energy have entire nations and the world focusing on addressing the problem. US President George W. Bush's Advanced Energy Initiative increased funding for the Department of Energy research and development activities by 22 percent for tackling our dependence on foreign energy. One promising viable solution is solar energy. A key component of the Advanced Energy Initiative is President Bush's Solar America Initiative that, "aims to win nationwide acceptance of clean solar energy technologies by 2015 (US Department of Energy 2006). Solar energy is available in different quantities and intensities worldwide. Due to worldwide concern about global warming and the shortage of traditional energy-producing fuels, the demand for such alternative energy-producing fuels such as sunlight is growing strongly (IMEC 2006). Solar energy has very important advantages. It is renewable, non-polluting and abundant (Guest Editorial 2004). Aldous (2007) reported that on a good "day, the sun shines approximately 1,000 watts of energy per square meter of the planet's surface," enough to provide free energy for all.

The most common procedure for converting light into electrical energy is by using a solar cell. The focus is on increasing the light falling on the solar cell (Elizabeth 2008). Solar cells have numerous applications. Some commonly visible applications are calculators, street signs and signal

lights, and some homes. They are especially viable for hard to reach areas where it may be very difficult or very expensive to run and supply electricity through wires. These solar cells or photovoltaic cells are commonly made out of a semiconductor, silicon. A portion of the light that falls on the semiconductor is retained by the semiconductor, which in turn electrons to be freed to travel in one direction. These electrons are captured by metal contacts at two ends of the semiconductor (Aldous 2007).

Work on solar cells can be traced back to Antoine-Cesar Becquerel, a French physicist, who discovered the photovoltaic effect in 1839. About half a century later, Charles Fritts was able to develop the first true working solar cell that transformed less than one percent of the absorbed light. The silicon solar cell was developed by Russell Ohl in 1941 (Solar Cell 2007). While developments and breakthroughs in solar energy technology have been progressing, it takes quite some time to make significant achievements. For example, most solar cells deliver 12 to 18 percent efficiency, in 1980s, the US Department of Energy reported achieving 16 percent efficiency, in 1994, the US DOE's National Renewable Energy Laboratory reported achieving greater than 30 percent efficiency and in December 2006, the US DOE reported that, "Boeing-Spectrolab has recently achieved a world-record conversion efficiency of 40.7 percent, establishing a new milestone in sunlight-to-electricity performance. This development shows promise for affordable solar energy, drastically reducing the cost of solar-generated energy to around 8-10 cents per kilowatt/hour. Estimates are that installation cost would be only $3 per kilowatt/hour (U.S. Department of Energy 2006). Currently solar electricity costs between 25 to 50 cents per kilowatt/hour (Lovgren 2005).

However, solar cells are expensive (University of California, Berkeley 2008). Yet, more than 90% of the solar cells in use are made of expensive silicon crystals (IMEC 2006). Therefore different modifications are being tried to maximize the energy generation capacities of solar cells. One such attempt is to use reflectors to maximize the amount of light falling on the solar cell (Gajbert, Hall, Karlsson 2007). Another group of attempts include using alternative technology and materials to create solar cells. The purpose of such attempts is to reduce the cost of solar cells. One such attempt in merging technology and materials is the creation of solar cells by combining nanotechnology and polymer science to develop flexible, plastic solar cells (Scientists Create New Solar Cell 2002). Work in this area has reached some milestones such as the development of spray-on plastic solar power cells invented by a group of scientists that include Ted Sargent from the University of Toronto, Canada (Lovgren 2005). Work is in progress at the Massachusetts Institute of Technology (Elizabeth 2008) on solar concentrators that increases output by using dyes on the cells.

The importance of finding ways and means of improving the energy generation (capacity of solar cells through design modifications and using alternative materials to silicon crystals is highlighted by the increasing coverage in the media on these attempts. In Europe, recognition has also increased for such work being done by various organizations, "to provide the scientific and technological basis for industrial mass production of cost effective, highly efficient and environmentally sound," solar cells (IMEC 2006). In the US, the DOE awards funds to Solar America Cities a year – "up to twelve cities that demonstrate their commitment to building a sustainable solar infrastructure (U.S. Department of Energy 2007).

- Studies involving similar problems, methods, or instrumentation

Similar Problems – Increasing energy generation by solar cells

Attempts at improving the yield of energy through solar cells have been ongoing. Some studies addressing improvements in power generation by solar cells are presented here.

Dalal and Moore (1977) found that the efficiency of solar cells is affected adversely in highly concentrated sunlight because of the increase in temperature and resultant chemical reactions. By coating a solar cell with a fluorescent coloring agent, Maruyama, Shinyashiki, and Osako (1998) were able to increase the amount of energy produced by a solar cell by 30%. They were able to achieve this because they were able to reduce the reflection of the light that fell on the solar cell.

Corlett (2003) studied the relationship between light intensity and voltage output by a solar cell. She found that as light intensity increased, voltage intensity also increased.

In a study on solar cell efficiency for space applications, Kumar, Suresh, and Nagaraju (2005) found that the temperature around the solar cell affects the performance of the cell. The temperature difference was caused by the different orbits of the spacecrafts.

In an attempt to develop solar cells with alternative materials to silicon, Jimbo, Soga, and Yasuhiko (2005) conducted research at the Nagoya Institute of Technology in Japan and found that silicon still emerged as the most reliable material for solar cell construction. Chemical reactions made alternative materials unstable.

In order to keep silicon cells from oxidizing, processes are used so that hydrogen atoms can bond to the silicon. Today's microelectronics uses multiple layers of silicon. For additional layers of silicon to be combined, these hydrogen atoms need to be removed. The removal process requires high temperatures that compromise the yield of the silicon cells due to resultant defects. Researchers at the University of Minnesota, Vanderbilt, the University of Tennessee and Oak Ridge National Laboratory have found that using lasers to remove these hydrogen atoms reduces the defects and thereby makes the yield from multiple layers of silicon chips higher.

In a three-year study from 1999-2002, Tomson and Tamm (2007) found that solar energy collectors that used multiple tilts towards the light source increased energy production by 10-20% over fixed south-facing collectors. This study was carried out in Estonia in Northern Europe.

Nasser and Salem (2007) experimented with solar cells in real conditions in Southern Libya and found that surface temperatures created challenges in using solar cells for power generation in areas with very high temperature. While areas with abundant sunshine would be natural choices for power generation using solar cells, modifications would be highly necessary.

Similar Methods – Using reflectors, Varying angles of light source

Furthermore, attempts at using reflectors and varying angles of light source in order to find out optimal designs for increasing power generated by solar cells have been carried out. Some of those studies are reported here.

Oscar Aviles and Manuel Gonzalez (2006) found that the highest amount of electricity was produced when the light source was at 90 degrees to the solar cell. However, the sun is not always at 90 degrees to the solar cell. Therefore innovation would be required.

In another experiment, Gajbert, Hall, Karlsson (2007) found that placing a reflector at an angle of 35 degrees produced the highest concentration of light on the solar cell and therefore the highest amount of energy generated. By using reflectors, the availability of light could be increased.

3. SCIENTIFIC METHODOLOGY

A. Hypothesis

Solar panels will generate different amounts of electricity in different geographic areas around the world.

B. Details Of The Study

Experimental Design:

The constants in this study are:

- The size of the solar cells
- The materials in the solar cells
- The concave/convex mirror
- The method of measuring electrical output

The independent variables in this study are:

- Location
  -- The latitude of the locations, Tiffin, Ohio, USA, 41.1°N, and Kolkata, India, 22.6°N.
  -- The longitude of the locations, Tiffin, Ohio, USA, 83.2°W, and Kolkata, India, 88.4°E.
  -- The elevation of the locations, Tiffin, Ohio, USA, 762 feet above sea level, and Kolkata, India, 60 feet above sea level. .

The dependent variable in this study is:

- The amount of electricity generated (volts x milliamps = milliwatts).

A total of 32 sets of observations were made in India, July 20 to August 2, 2008. Another 32 sets of observations were made in USA, August 9 to September 28, 2008.

Some Photos of the Protocol Followed

INDIA

USA

C. The Data

The data is presented here in Charts 1, 2, 3, 4, and 5.

CHART 1

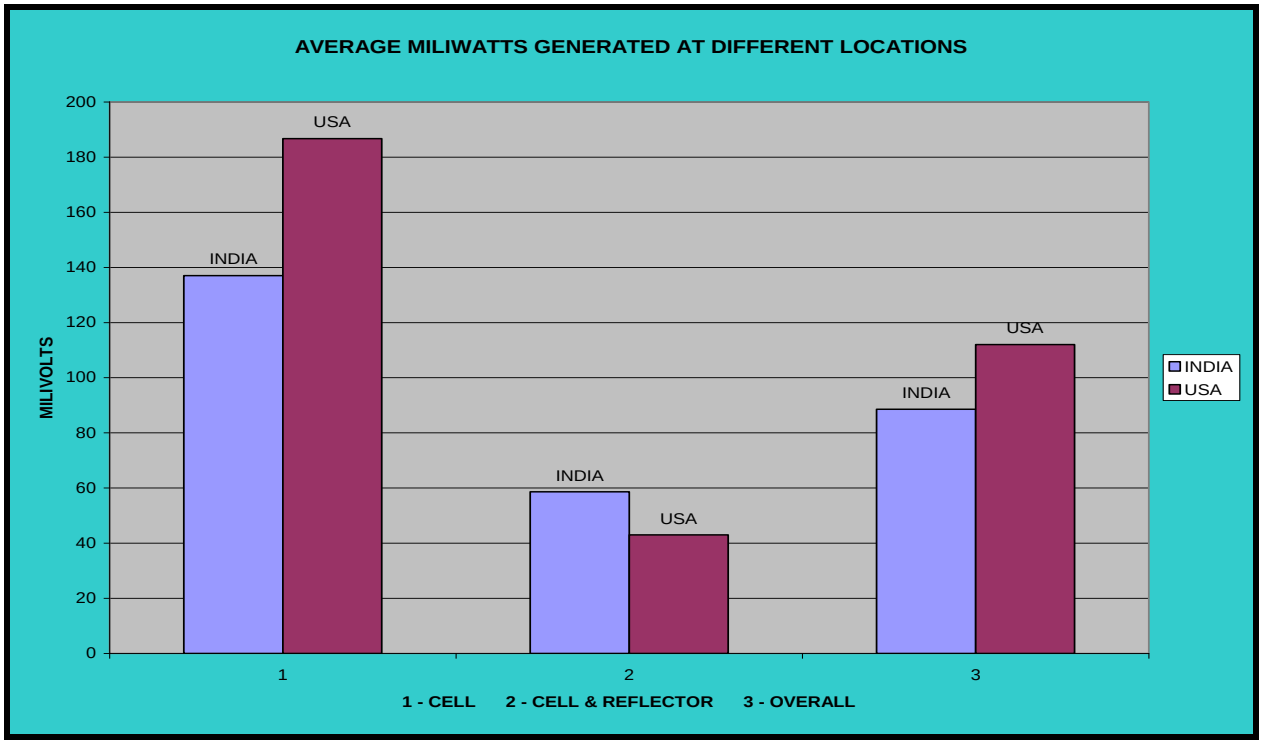


CHART 2

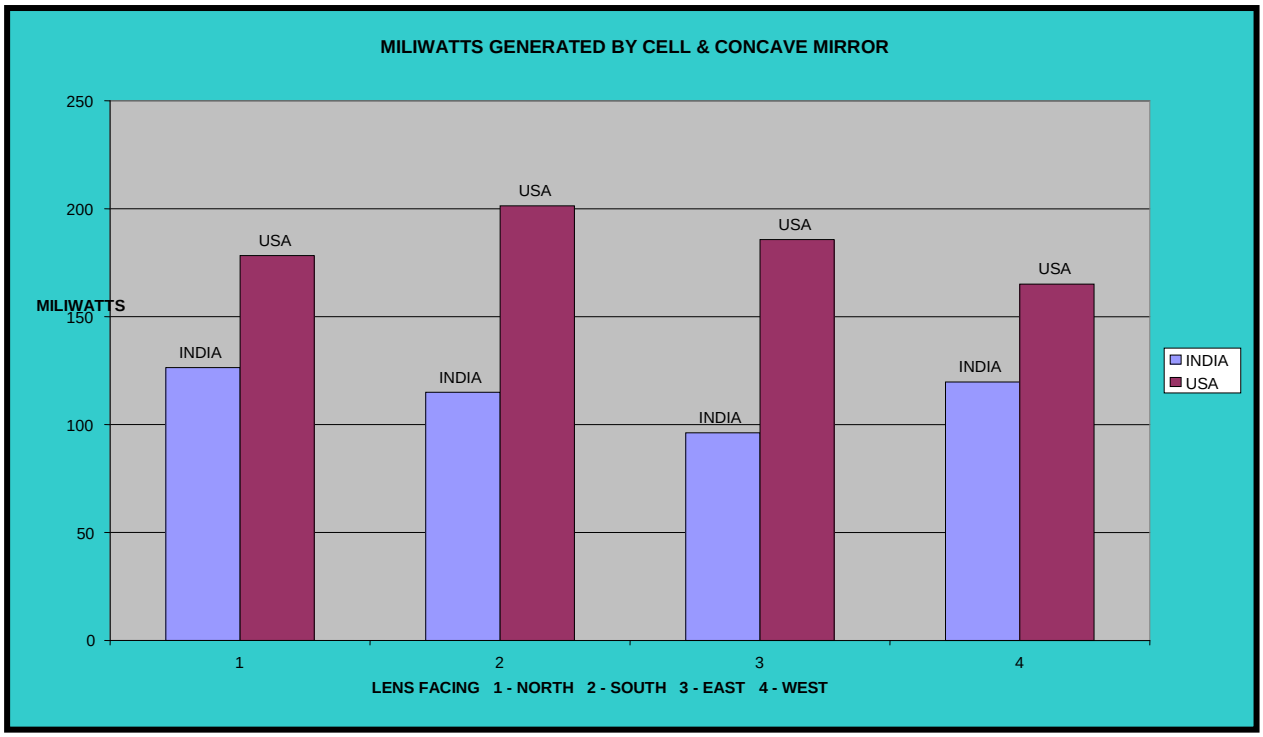


CHART 3

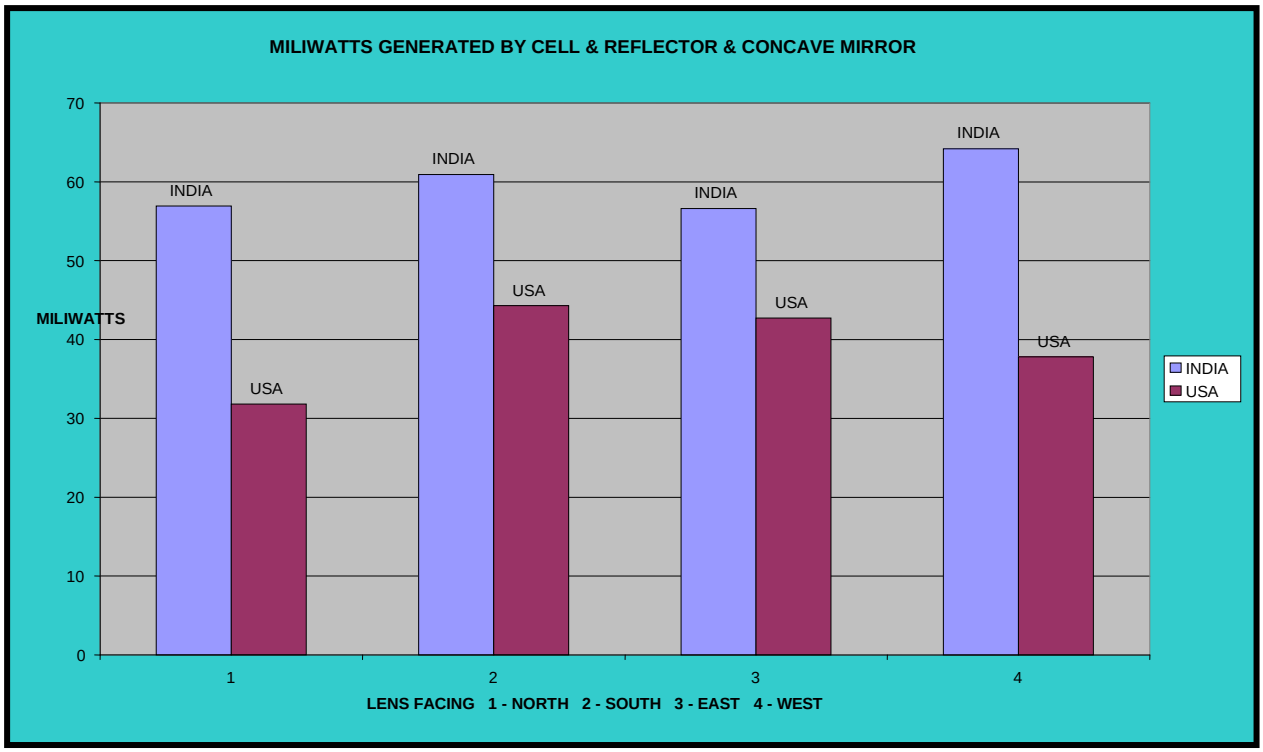


CHART 4

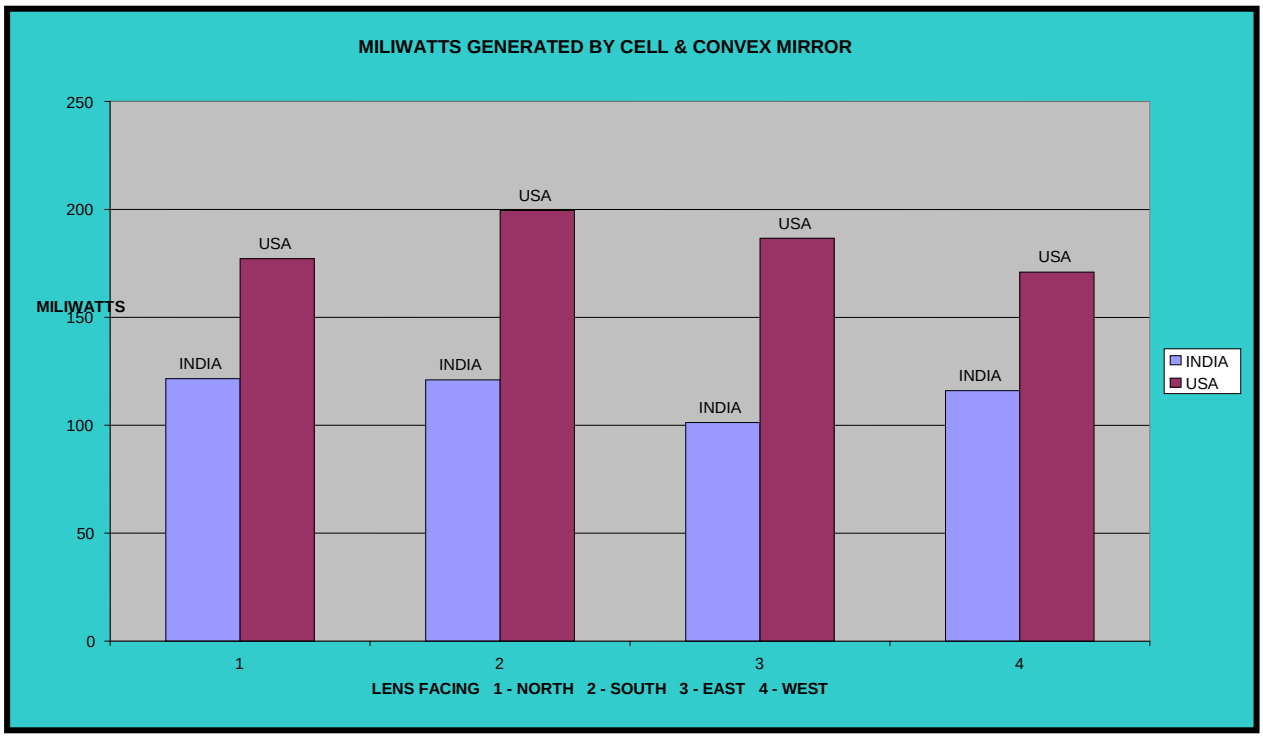
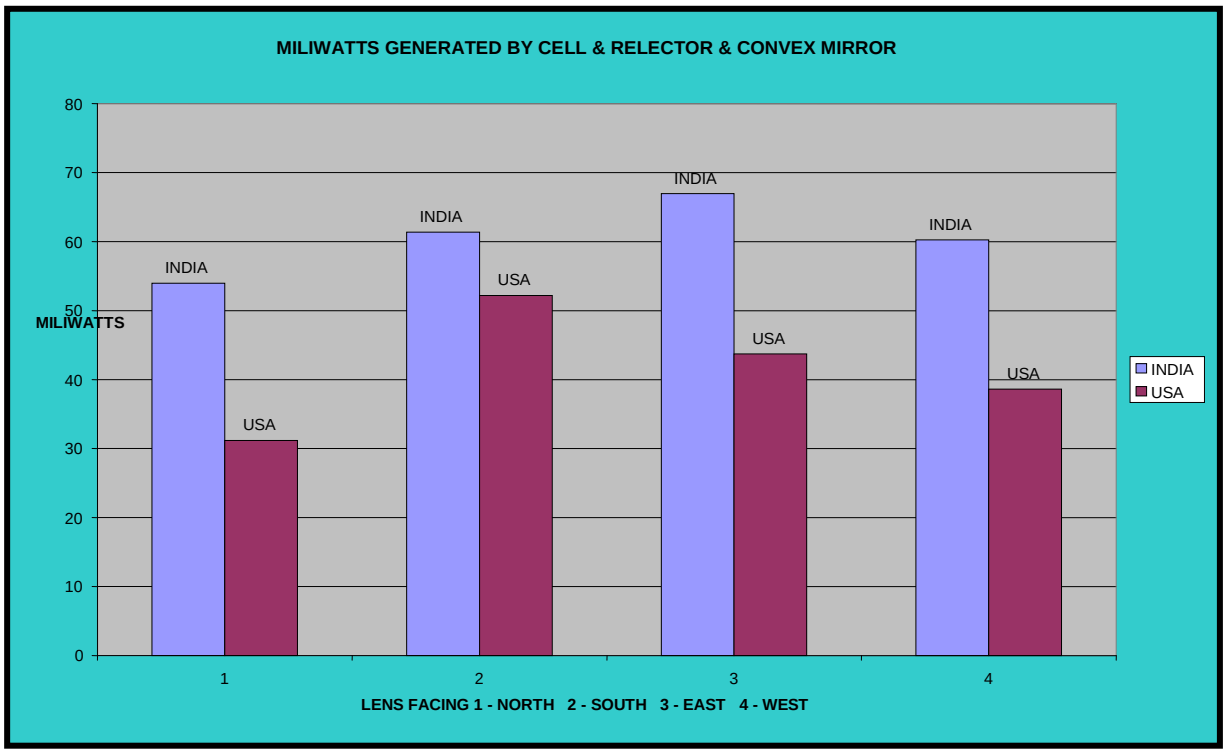


CHART 5



EXPLANATION

These findings can be explained by a multiple regression analysis of observations that resulted in the following mathematical model:

Energy Generated by Solar Cell = 22.283 - 0.0287(Heat Index) + 1.932(Visibility)
+ 1.870(UV Index) – 1.027(Wind Speed)

Heat Index, Visibility, UV Index, and Wind Speed were recorded in observations.

D. Data Analysis

The hypothesis:

Solar panels will generate different amounts of electricity in different geographic areas around the world.

was supported in all cases. In some cases the US location proved to be better and in some cases the Indian location proved to be better.

4. CONCLUSIONS

The following conclusions were drawn as a result of the analysis of the data.

- There is a difference in the amount of energy solar cells can generate in different locations around the world.
- Solar cells generate more energy in higher latitudes.
- Solar cells with reflectors generate more electricity in lower latitudes.
- Solar cells combined with a mirror, concave or convex, generate more energy in higher latitudes.
- Solar cells combined with a reflector and a mirror, concave or convex, generate more energy in lower latitudes.
- As the solar cell got heated due to exposure to the light source its ability or efficiency for voltage generation decreased.
- Solar cells are a good option for generating electricity in USA.

5. APPLICATIONS

The following applications can be logically pursued as a result of the findings of this study. They are:

- Areas of the world between 23 ½ degrees North and South of the equator that receive direct sunlight can use reflectors and mirrors to increase the ability of solar cells to generate electricity.
- A higher amount of energy at lower average cost per unit may be produced using reflectors in these parts of the world.
- Scientists will have to develop means to reduce the heating up of solar cells so that the voltage generation capacity is not lost.
- Reflectors may not increase energy generation capacity of solar cells in areas North of the Tropic of Cancer and South of the Tropic of Capricorn.
- The next logical steps in scientific investigation would be to look into better means of storing and distributing the energy generated by solar cells.
- Scientists will have to look into the ability of magnifying glass to increase the energy generation capacity of solar cells. A breakthrough would have huge financial benefits.

6. REFERENCES

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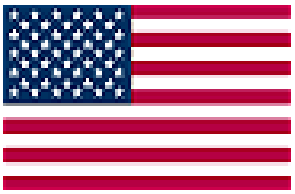
A SWOT ANALYSIS OF HOMEOPATHY IN USA: ALTERNATIVE MEDICINE



Dr. Prakashsinh Parmar
The University of Findlay, USA

Introduction

Homeopathy is a form of alternative medicine, which is first proposed by German physician Samuel Hahnemann in 1796 that treats patients with heavily weak preparation which are thought to cause effects similar to the symptoms presented. It is used for wellness and prevention and to treat many diseases and conditions. This fact provides general overview of homeopathy and suggests sources for additional information. Homeopathic remedies also called homeopathic are a system of medicine based on three principles which are like cures like, minimal dose and the single remedy. Homeopathy is difficult to study using current scientific methods because highly weak substances cannot be readily measured, making it difficult to design or replicate studies. Moreover, homeopathic treatments are highly individualized and there is no uniform prescribing standard for homeopaths. There are hundreds of different homeopathic remedies, which can be prescribed in a variety of different dilutions to treat thousands of symptoms. Homeopathy is second most widely used system of medicine in the world. Its growth in popularity in the United States has been around 25 to 50 percent a year throughout the last decade.

In the 18th century, the medical science was still very unscientific. The knowledge about human body, diseases and the modalities of treatment were poor and vague. Methods like blood-letting, leeching, purging were common treatments for most ailments. Homeopaths treat people based on genetic and personal health history, body type, and current physical, emotional, and mental symptoms. Patient visit tend to be lengthy. Treatments are "individualized" or tailored to each person- it is not uncommon for different people with the same condition to receive different treatments. Homeopathic remedies are derived from natural substances that come from plants, minerals, or animals. Common remedies include red onion, arnica (mountain herb), and stinging nettle plant. These remedies generally contains few or no pharmacologically active molecules, and for such remedies to have pharmacological effects would violate fundamental principles of science. Modern homeopaths have proposed that water has a memory that allows homeopathic preparations to work without any of the original substance; however, the physics of water are well understood, and no known mechanism permits such a memory. It actually maintains that the vital force has the ability to react and adapt to internal and external causes, which homeopaths refer to as the law of susceptibility implies that a negative state of mind can attract hypothetical disease entities called miasms to invade the body and produce symptoms of diseases. The effectiveness of homeopathy has been in dispute since its inception. The methodological quality of the research base is generally low, with such problems as weaknesses in design or reporting, small sample size, and selection bias. No individual preparation has been unambiguously demonstrated to be different from a placebo. This came out with some positive results, but no single model has been sufficiently widely fake. The evidence of bias weakens the findings of our original meta-analysis.

Furthermore, as homeopathic remedies usually contain only water and alcohol, they are thought to be generally safe. Homeopathy achieved its greatest popularity in the century. The first homeopathic schools opened in 1830, and throughout the 19th century dozens of homeopathic institutions appeared in Europe and the United States. So ultimately, this is the fact that homeopathy is used for wellness and prevention and to treat many diseases and conditions. The side effects and risks of homeopathic are not well researched outside of observational studies. Today, more than ever before, there is a dire need for

homeopathy as our global community is facing its greatest challenges. Though the average life-span has continued to increase, the value of life has decreased in direct correlation. The causes of the unparalleled destruction are multifold and interrelated. With the advent of modern medicines powerful and often suppressive drug which tend to treat the outcome of disease without addressing their cause and in most cases is either genetic or hereditary or a deficiency of the autoimmune system, they have thus driven the disease from a more superficial expression to a deeper level. Another factor is modern society's emphasis on achievement and success, and its resultant increase in stress and anxiety on a mass level. This has had a profound affect on all the levels of man's state of existence, where we find that people are always feeling exhausted and have practically lost their ability to rest and restore their own energy. Along with this loss of focus and deviant attitude has come a polluted environment, food lacking substantial nutritional value and a society governed by fear and future shock.

Homeopaths refers to the "the law of infinitesimals" and the "Law of Similar" as grounds for using minute substances and for believing that like heals like, but these are not natural laws of science. If they are laws at all, they are metaphysical laws, such as beliefs about the nature of reality that would be impossible to test by empirical means. Hahnemann's ideas did originate in experience. That he drew metaphysical conclusions from empirical events does not, however, make his ideas empirically testable. The law of infinitesimals seems to have been partly derived from his notion that any medicine would cause the patient to get worse before getting better and that one could minimize this negative effect by considerably reducing the size of the dose. Most critics of homeopathy balk at this law because it leads to remedies that have been so diluted as to have nary a single molecule of the substance one starts with.

Today's homeopaths should know that because of the complexity of each individual human body, fifty different people may react in fifty different ways to the same substance. This makes doing clinical trials on potential medicines a procedure that should rarely claim dramatic results on the basis of one set of trials. Finding a statistically significant difference, positive or negative, between an experimental group and a control group in one trial of a drug should usually be taken with a grain of salt. So should not find anything statistically significant. It is not uncommon for twenty trials of a drug to result in several with positive, several with negative, and several with mixed or inconclusive result.

Why does anyone believe homeopathy works?

Homeopaths have had over 200 years to demonstrate their wares and have failed to do so. There are single studies that have found statistically significant differences between groups treated with an HR and control groups, but none of these have been replicated or they have been marred by methodological faults. Two hundred years and we are still waiting for proof. Having an open mind is one thing, waiting forever for evidence is more akin to wishful thinking. Homeopathy will always have its advocates, despite the lack of proof that its remedies are more effective than a placebo. The sum of all the scientific evidence shows clearly that homeopathic remedies are no more effective than placebos. This does not mean that patients don't fool better or actually get better after seeing a homeopath. That is quite another matter and is clearly the reason for the satisfied customers.

History of homeopathy in USA:

One of Hahnemann students had founded the first homeopathic medical school in the United States in the late 1800's. It gained recognition, because of its success in treating the many disease epidemics rampant at the time; including scarlet fever, typhoid, cholera and yellow fever. Homeopathic method of treatment became very popular in the early 1900's. At that time, there were 22 homeopathic medical schools, 100 homeopathic hospitals and over 1,000 homeopathic pharmacies. Boston University, Stanford University and New York Medical College were among those educational institutions that were teaching homeopathy.

Use in the United States:

People use homeopathy for a range of health concerns, from wellness and prevention, to the treatment of diseases and conditions such as allergies, asthma, and chronic fatigue syndrome, depression, digestive disorders, ear infections, headaches, and skin rashes. Homeopathy is also rising again in the United States. This resurgence has been documented by the National Center for Homeopathy in Virginia, which stated that Americans spent 230 million dollars on homeopathic remedies in 1996. It has also been said that sales are rising rapidly at about 12 – 15% each year. According to the 2007 National Health Interview Survey, which include a comprehensive survey of complementary and alternative medicine use by Americans, as estimated 3.9 million U.S. adults and approximately 900,000 children used homeopathy in the previous year.

By the end of the twentieth century approximately 25% of participating physicians in the United States were professed homeopaths. In the first half of this century due to complex social forces homeopathy has become largely unknown until the most modern renewed interests in natural medicine. In France over 6,000 physicians currently actively practice homeopathy and most of the pharmacies carry at least a few hundred remedies. Homeopathy is also popular and easily accessible in Germany, Switzerland and Italy. Greece houses one of the most prestigious homeopathic clinics in the world. In India there are over 70,000 practitioners of homeopathy. In Mexico, Brazil, and Argentina there are renowned homeopathic medical facilities.

SWOT analysis of homeopathy:

Strength:

The homeopathic medicines are useful for those who are allergic to allopathic medicine. There are lots of chemical products, which are harmful to human body. Penicillin and NSAID (non steroidal anti-inflammatory drug) product are the top most and on the other hand they have some side effects. Sometimes, threatening situation arise, after taking those kind of drugs. Homeopathic treatment has been shown effectively in treating many diseases. Influenza sufferers in a double-blind study found that they were twice as likely to recover in 48 hours when they took homeopathic remedies. Studies have been published in British medical journals proven, that the homeopathic medicines were effective for treatment of rheumatoid arthritis. Homeopathic remedies are effective in treating infections, respiratory diseases, heart disease, depression and nervous disorders, migraine headaches, allergic condition, arthritis, and diabetes. Homeopathy is a good treatment for acute and chronic illnesses. If the disease are found in the early stages and where there is not severe damage (irreversible changes). Homeopathy can be used to assist the healing process after surgery. It is safe and good for new born baby. Even, it is better than modern medicine for pregnant women. Allopathic medicine has many side effects in pregnant women. Also homeopathic medicine is work as a prophylactic medicine. It works like immunizations, if it is given at the time of epidemic.

Weakness:

The main weakness of homeopathy is neglected by Insurance companies and government. If the insurance companies cover homeopathy medicine then it may possible for lot of people to show interest on homeopathy. Insurance companies can show interest because this is efficient and at the same time cost effective can also be very effective. Marketers can first target the population, who are familiar with the Homeopathy medicine, where immigrant population is more, later they can expand their market. Negotiating with government, such as homeopathy will be covered under prescription drug plan of Medicare and Medicaid, because prescription drugs are taking significant part in overall cost of Medicare and Medicaid. As the Homeopathic medicine is available for less cost than allopathic medicines.

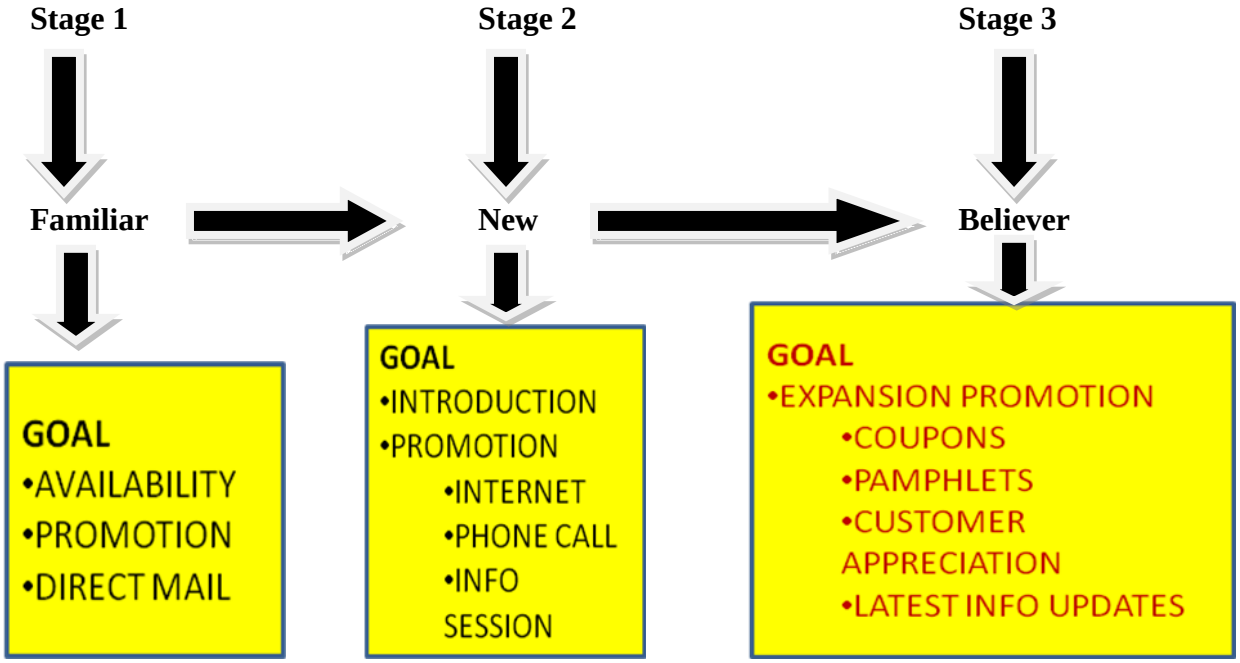
Opportunities:

There are many opportunities for homeopathy in USA. Right now, health care cost is the prime issue in USA, because the cost of health care is high. There are many reasons for that, but one of them is cost of the drug. The drug cost of homeopathic medicine is very low compare to allopathic medicine. Anybody can afford the homeopathic medicine because it is too cheap and easily available. Second most valuable opportunity has low side effects. Homeopathic medicine has a low side effect compare to allopathic medicine. It is consider as an alternative medicine in many countries and in some countries it is practiced under naturopathy. Last but not least opportunity is high immigrant population from homeopathic using nations. In USA, many people came from the country like India, Europe, and china where homeopathy is commonly used. So it is easy to market homeopathy in USA.

Threats:

The first is the opposition from the different in rest groups like the American medical association and the different Pharmaceutical Corporations. These groups have a big disadvantage, if homeopathy grows fast in USA. They are the main opponent of homeopathy. The lack of information about the homeopathy is a very big disadvantages that marketers going to face. The next challenge is the strict discipline that is required while taking homeopathic medicines. You cannot take homeopathic medicine 30minutes before and after taking food. You can't eat onion and garlic while you are on homeopathic medicine. Even more, you are not allowed to drink coffee, while you are taking homeopathic drugs. There is much other discipline which you need to follow when you are on homeopathic treatment.

Strategies for the marketing of homeopathy:



How to market homeopathy in USA? There are unexpected views and opinion of people about the marketing of homeopathy in USA. I have tried to explain it with the chart. I have divided the strategy in three different stages, where in each stage you need to select specific group of population with a particular goal.

Stage 1: Stage one is a familiar stage in which, only those people are considered who were familiar with the homeopathy. Like the people who are immigrant from the countries where homeopathy is famous like India, Brittan, and China. The main goal is to make easily availability of homeopathic medicines. Here you need to give some kind of promotions; like free treatment by organizing a camp or free check

up. In India, doctor usually organized a general camp to promote their clinic same thing anybody can do here too. Now a day's direct mailing is a good technique to market a product in a market. Same way you have to mail all the information about homeopathy to the selected group of people.

Stage 2: stage two is a new stage; in this stage select those people who don't have any kind of knowledge about the homeopathy. Here people are mostly from USA, Mexican, and African. They do not possess any knowledge about the homeopathy and it is hard to market homeopathy in this group. People from the familiar group can help to market homeopathy in this group, because they are staying between this people and with the help of those who benefited by homeopathy can make it easily. The mouth to mouth marketing is the best and permanent source of marketing for homeopathy. In this group goal is to introduce homeopathy with the help of familiar group. Secondly, by using telemarketing, using internet, and by arranging informative session. Today most of people using internet, so internet is the best source to market homeopathy. You can explain do and don't of homeopathic treatment. You can put the pictures of patients who were benefited by homeopathic treatment. Patient's revues are the best source for the new group.

Stage 3: stage three is a believer, in this group we need to concentrate on the people who are now started believing in the homeopathy. Here, goal is to provide latest update of the homeopathy. What is new coming in the market? Whatever is new prime goal is to provide all the latest information via email, mail or telephonic communication. In this group you can also provide some kind of coupons to attract more and more people.

At last, basic laws of nature have been breached and irreparably altered; as in the survival of the fittest which was nature's built in mechanism or selective process for filtering out the weaker traits in any particular species. Science and medical advances have enabled genetically flawed DNA to be passed on and resulted in the proliferation of inherited systemic disorders. Thus as society continues to expand and co-mingle, transmutation and inter-combination of defective genetics on the level of the DNA have contributed to the general loss of quality of life. Another factor is modern society's emphasis on achievement and success, and its resultant increase in stress and anxiety on a mass level. With all these negative influences threatening the very fabric of man's existence- where can people look to for an effective and comprehensive solution? Humanity is most definitely in dire need of some positive solutions. Homeopathy is a holistic system of medicine that stimulates and encourages one's natural healing force of recovery. Homeopathy works with the body's natural healing forces instead of against suppressive.

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HUMAN FACE OF MARKETING---ETHICAL ISSUES IN MARKETING FOR CHILDREN

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Key words : Social Marketing, Cause Marketing, Marketing Ethics, Ethics, Marketing

Abstract

The present day of marketing has a greater responsibility in the light of majority of consumers being young and teens. There is a lot of pressure on these groups to indulge in consumption because of peer pressure. This is the most vulnerable group for the marketers. This takes us to a basic question as to how ethical are marketers in marketing to children.

Marketers should consider ethical issues in marketing along with profits, production cost, consumer demand etc. Ethical marketing is delivering honest and factual products and services. Marketers should also consider social and cultural values of consumers.

Children, below 10 years represent an important demographic to marketers because they influence their parents buying decisions. For some products children have their own purchasing power and they are the future consumer. Advertising and other marketing tools put an enormous impact on child development. This paper tries to explore the ethical aspects of marketing to children.

1. INTRODUCTION:

Ethical marketing is an honest and factual representation of a product, delivered in a framework of cultural and social values for the consumer. It promotes qualitative benefits to its customers, which other similar companies, products or services fail to recognize. Marketing ethics is the area of applied ethics which deals with the moral principles behind the operation and regulation of marketing. The present day of marketing has a greater responsibility in the light of majority of consumers being young and teens. Children below ten years of age group represent an important demographic to marketers because they influence their parents buying decisions. For some products tweens have their own purchasing power and they are the future consumer. Today's kids have more autonomy, decision-making power and 'pester power'. Advertising and other marketing tools put an enormous impact on child development.
There is a lot of pressure on these groups to indulge in consumption because of peer pressure. This is the most vulnerable group for the marketers. This takes us to a basic question as to how ethical are marketers in marketing to children. Marketers should consider ethical issues in marketing along with profits, production cost, consumer demand etc. Ethical marketing is delivering honest and factual products and services. Marketers should also consider social and cultural values of consumers.

2. OBJECTIVES OF THE STUDY:

- To understand the ethical issues in marketing to children worldwide and specifically to India.
- To study how children perceive advertisement.
- To give suggestions based on findings of the research.

3. METHODOLOGY:

Keeping in view the various aspects of advertising and effects of it on the present day generation, a research on the children sections was taken up. A study in this connection was specially done in respect of the child population in Bangalore city as it is one of the cosmopolitan cities of India. Both primary and secondary data was used. Primary data was collected from the different age groups of youth in the city. A group of respondents below the age group of 10 years were chosen as the sample for the research study.

Primary data collection was collected from a well structured questionnaire, which was personally administered. 150 respondents were chosen non- randomly from Bangalore city. For the purpose of the studying the children perception about advertisement and their opinion on the research a set of 3 questions were asked.

The secondary data has mostly contributed in the area of review of literature and also in framing certain questions in the questions and gaining in an insight in the research topic. The data collection of secondary nature has been vastly contributed from various articles, journals and other publications.

The collected data was put to statistical test depending upon the requirements. Analysis is made at 2 levels. At the macro level the data was classified and tabulated. Percentiles have been used for the purpose of analysis. A general analysis was also made to understand the trend.

4. MARKETS TARGETING KIDS:

Marketers across the world and even in India are targeting children for marketing of their products. Kids represent an important demographic factor to marketers because they have their own purchasing power, they influence their parents' buying decisions, and are the adult consumers of the future. Parents today are willing to buy more for their kids because of trends such as smaller family size, dual incomes, and postponing children until later in life, mean that families have more disposable income. Moreover, guilt plays a significant role in spending decisions as time-stressed parents substitute material goods for time they couldn't spend with their kids.

Today's kids have more autonomy and decision-making power within the family than in previous generations. Kids are more vocal about what they want their parents to buy. Marketing to children is all about creating pester power, because advertisers know what a powerful force it can be. **Pester Power** refers to children's ability to nag their parents into purchasing items they may not otherwise buy. Pestering or nagging can be divided into two categories - "persistence" and "importance". Persistence Nagging is a plea, that is repeated over and over again, is not as effective as the more sophisticated importance nagging. This latter method appeals to parents' desire to provide the best for their children, and plays on any guilt they might have about not having enough time for their kids.

"Brand marketing must begin with children. Even if a child does not buy the product and will not for many years… the marketing must begin in childhood."

James McNeal, The Kids Market, 1999

4.1. ETHICAL ISSUES IN MARKETING TO CHILDREN:

Children are becoming consumers at younger and younger ages, and a variety of influences and experiences shape their consumer habits. What fascinates them--- the giant cola companies, the chips

makers the chocolate sellers etc. Children are a lucrative market and their main products are unhealthy foods, fashionware and entertainment goods. Food companies are desperate for sales and growth and if they can use ‘health’ to sell junk food, they will. Children have been bombarded with advertisements on Burgers and Cola, of Pizza and Fries.

The ethical marketing strategies include the packaging or serving the food in reasonable sizes without encouraging over-eating. The products also should be reformulated to reduce the size of the portions, the amount of calories, the sodium content and saturated fats. Emphasis should be to improve the nutritional value of the food by concentrating more on fruits, vegetables, food grains and low fat milk contents in the food products. There should be strenuous efforts to promote healthy eating habits in a positive way. The advertisements should not focus on nutritionally poor food products especially on those channels that are particularly watched by children.

4.2. ISSUES IN UNETHICAL FOOD MARKETING:

Children are a lucrative market and their main products are unhealthy foods, fashionware and entertainment goods. Food companies are desperate for sales and growth and if they can use 'health' to sell junk food, they will. Children have been bombarded with advertisements on Burgers and Cola, of Pizza and Fries. Brilliantly marketed highly salty foods are being deliberately targeted for our children's lunch-boxes. The liking for salty foods is a learned taste preference set in childhood and so encouraging children to eat high levels of salt sets the seeds for vascular diseases, increasing the risk of developing stroke and heart diseases later in life. High salt intakes have also been linked to osteoporosis, stomach cancer, asthma and kidney diseases. Their preference for any meal is high on fat, sugar, and salty species, and low on nutrients. Influences created by marketers on children may be harmful but the one created on food and hygiene is the worst. The issue of excessive food marketing to kids is fast becoming a hotly debated topic. Marketing to children under age eight is unethical because young children don't have the critical thinking skills required to evaluate media messages. Children under twelve spend more on their own or influence family spending decisions but are not capable of resisting or understanding marketing tactics at such younger ages. At older ages, competitive feelings towards children are stronger than financial sense. The use of marketing practices targeted at children to sell highly salted products is unethical marketing practice. Ethical practices are aimed to ensure a sustained market. Although promotional techniques are used to encourage usage by a particular target audience, they should not be used on those that are vulnerable and at such a crucial stage of health and development.

Children are becoming consumers at younger and younger ages, and a variety of influences and experiences shape their consumer habits. The marketing of "junk food" is done in such a way that it makes them attractive to young children although it provides very low nutrient content. The junk foods mainly include energy-dense fast foods like the puff pastries and burgers containing large quantity of margarine, mayonnaise, butter or cheese. Though these food products are claimed to be manufactured using the best technology under most hygienic standards by trained professionals, they generally tend to be High in Fats, Sugars and Salts (HFSS foods) contributing to an environment of more obese people with diet-related non-communicable diseases like the cardio-vascular diseases, osteoporosis, certain forms of cancer and high blood pressure. Today's marketing techniques are highly effective and encourage regular consumption of food with low nutritional content. There are a few basic issues that need to be addressed as far as advertising is concerned. The main issues in unethical marketing are puffery, bad taste, stereotyping, targeting children, promoting unhealthy products and subliminal advertising. The ethical marketing strategies include the packaging or serving the food in reasonable sizes without encouraging over-eating. The products also should be reformulated to reduce the size of the portions, the amount of calories, the sodium content and saturated fats. Emphasis should be to improve the nutritional value of the food by concentrating more on fruits, vegetables, food grains and low fat milk contents in the food products. There should be strenuous efforts to promote healthy eating habits in a positive way. The advertisements should not focus on nutritionally poor food products

especially on those channels that are particularly watched by children.

1.3. ETHICAL MARKETING STRATEGIES:

1.4. Marketing to children under ten is unethical because young children don't have the critical thinking skills required to evaluate media message. The advertisements should not focus on nutritionally poor food products especially on those channels that are particularly watched by children. Emphasis should be to improve the nutritional value of the food by concentrating more on fruits, vegetables, food grains and low fat milk contents in the food products. Some countries are taking steps towards protecting children from ads. European Governments have placed restrictions on television commercials targeting kids. But in India, we do not seem to understand the problem yet.

In Canada, there are rules that advertisers must follow when advertising to children. They are:

- Advertisers must not use words like "new," "introducing" and "introduces" to describe a product for more than one year.
- Advertisers are not allowed to exaggerate.
- Advertisers may not promote craft and building toys that the average kid can't put together.
- Advertisers are not allowed to sell products that aren't meant for kids.
- Advertisers are not allowed to recommend that you *have* to buy their product, or that you *should make* your parents buy it for you.
- Advertisers may not use well-known kids' entertainers (including cartoon characters) to promote or endorse a product.
- Advertisers can't make you believe that you're getting everything that's shown in the commercial.
- Advertisers are not allowed to show kids or adults doing unsafe things with the product.
- Advertisers can't suggest that using their product will make you better than other kids.
- Advertisers cannot show more than one commercial for the same product in a half-hour period.

4.5. HOW CHILDREN PERCEIVE ADS:

In order to understand how advertisements are perceived, a primary survey was conducted amongst children. A set of three questions were asked to them to evaluate the concept. The questions were like When do you watch TV-- While eating or after food? Which channel do you personally prefer? Time spent by children watching TV in a day?

A) When do you watch TV-- While eating or after food?

A habit which is observed amongst children worldwide is watching television and simultaneously eating food. When asked when do you watch television while eating or after food, around 80% of children watch TV while eating which may affect their food intake and cause severe damage to their health especially mental and physical health.

B) Which channel do you personally prefer?

The preference of channel choice is always seen in children. They sometimes force parents also to watch the channels they prefer the most. In this study when asked about which channel you prefer personally to watch, 79% of the children mentioned that they like to watch cartoon channels. The study also reveals that children are more exposed to the characters shown there and the products endorsed by these cartoon characters which may imbibe bad food habits in children as most of the Advertisements don't project healthy diet.

C) Time spent by children watching TV in a day?

In the study it was observed that 55% of children spent 1-2 hours a day watching television and this directly affects their health both mental and physical.

4.6. PROBLEMS IN INDIA AND THE CHANGES SEEN:

There are a number of problems faced in the India especially with regard to advertisements for children.

- In India, there were no specific advertising laws that relate to children and food-related advertisements in particular.
- A host of laws and Acts like 'Cable TV Networks(Regulation) Act, 1995' and the 'Infant Milk Substitutes, Feeding Bottles and Infant Food Act' deal with children related advertisements in a vague way.
- Advertisements target at children and most of them feature young children, even babies.

Changes seen in the India:

ASCI (Advertising Standards Council of India) has now brought in self- regulation guidelines for the advertising of food and beverages which come into effect from the Jan. 2008. Advertisers will have to observe "caution and care while promoting products containing high fat/sugar/salt, directed at children below the age of 13 years.

5. SUGGESTIONS:

- **Parental involvement and Education:** Parents play a vital role in the child's development and can bring a change to this situation. Their involvement towards this issue can be a path taking measure. Educating the parents related to the after effects of using products by children can always be done by the governments and social authorities.
- **Active role of schools:** School where the child study can also bring a change to this issue. They can conduct programs which educate child about the ill effects of using harmful products and avoiding them from their routine habits.
- **Statutory Warnings:** There can be a statutory warning printed on the packets so that its observed and parents and children become cautious while purchasing the product. The warning can be---

  "Intake of this food more than twice a day/ week is harmful for health"

  Government should take an initiative related to this issue.
- **Advertising Code/ Broadcasting Code:** There should be effective supervision of advertisements on the basis of advertising code/ broadcasting code. Changes are seen related to this but not very rigorously.

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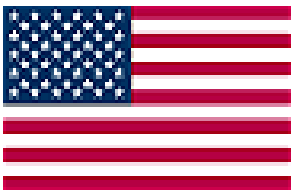
INTERNATIONAL COOPERATION IN HEALTH CARE FOR THE RURAL MASSES: AN U.S. – INDIA STRATEGIC ALLIANCE



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ABSTRACT

Each year hundreds of international students enter the United States for the purpose of obtaining a post graduate degree in business – usually a MBA. Many of these young people hold professional degrees in engineering, medicine, dentistry, pharmacy and physical therapy. Following graduation from a US University many seek jobs in the United States or further pursue their professional degree education leading to licensure or certification in the U.S. It is suggested that this "brain drain" be reversed.

The purpose of this paper is to suggest an outline for a strategic alliance with an Indian educational or healthcare organization that would provide encouragement for Indian students to return to India to start new hospitals in rural areas; to help manage and provide professional services to those hospitals; and to adopt A Habitat for Humanity approach in building hospitals. Moreover, an alliance between a major US teaching hospital and an Indian partner as noted above will hopefully expedite a quality initiative to assure both accessible and quality health care. Steps to success are outlined below.

- US teaching hospital and Indian partner formalize a Memorandum of Understanding (M.O.U.)

- The University of Findlay (U of F), Findlay, Ohio (U.S.A.) has an MBA program with a concentration in Health Care Management (HCM). The U of F serves approximately 800 international students on its Findlay Campus. Approximately 75% of these students are from India and hold professional degrees similar to those noted above. Following completion of their MBA studies the students would be assigned an internship site at a new rural hospital being built in India.

- The U of F would partner with the US teaching hospital and Indian partner in a three way partnership.

- Under the guidance of the partners, a new hospital would be built using volunteers similar to the Habitat for Humanity approach. MBA student interns would assist in managing and staffing the new hospital(s).

- Major fund raising efforts would be launched in the US, to provide necessary funding. Approaches would be made to local Rotary Clubs – members of Rotary International.

- The teaching hospital and Indian partner would monitor and assure access and quality.

CORPORATE SOCIAL RESPONSIBILITY INITIATIVES TOWARDS SOCIAL LEADERSHIP DEVELOPMENT

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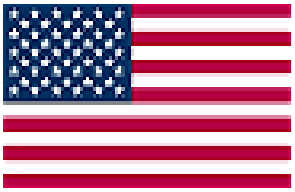
ABSTRACT

Corporate Social Responsibility is a constant opportunity seeking creative exercise for corporates. CSR in organisations are not only the resource of boosting the company's economic benefits, reputation or image but it goes beyond to create and exhibit the deepest commitment it has towards the social development. The times, when social opportunity being used as corporate strategy are not far for organisations across the world. The challenge for the organisations in taking up specific initiatives is also influenced by their keenness to respond to the savage challenges in the immediate or global socio-cultural-political environments. The most common problem faced by the nations is to have promising and relevant leaders with vision for the respective country, through which they leave an impact legacy. The third world countries and economically developing countries have leadership crisis at all levels. The leadership crisis is visible only when it is not available at the top rung leadership positions. This year is election year, in which most of the democracies across the world would vote to choose their future leaders. The common challenge for all these countries is that they don't have an inherent integral system to develop their leaders of desirable qualities.

This paper aims to address some of the concepts, conceptual frameworks, and philosophical, ethical and social challenges in Social Leadership development in the form of Corporate Social Responsibility. It also seeks to develop few feasible working models to implement CSR initiatives in Social Leadership Development activities or implementation.

CAREER OPPORTUNITIES IN BIOTECHNOLOGY: REALISTIC OUTLOOK OF THE MARKET



Shamini Reddy Katepally
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WHAT IS BIOTECHNOLOGY?

The use of living organisms (especially microorganisms) in industrial, agricultural, medical and other technological applications; in its purest form, the term "biotechnology" refers to the use of living organisms or their products to modify human health and the human environment.

Biotechnology in one form or another has flourished since prehistoric times. When the first human beings realized that they could plant their own crops and breed their own animals, they learned to use biotechnology. The discovery that fruit juices fermented into wine or that milk could be converted into cheese or yogurt, or that beer could be made by fermenting solutions of malt and hops began the study of biotechnology. When the first bakers found that they could make soft, spongy bread rather than a firm, thin cracker, they were acting as fledgling biotechnologists. The first animal breeders, realizing that different physical traits could be either magnified or lost by mating appropriate pairs of animals, engaged in the manipulations of biotechnology.

HISTORY OF BIOTECHNOLOGY

The term "biotechnology" started from 1919, when the Hungarian engineer Karl Ereky first used it to mean "any product produced from raw materials with the aid of living organisms." Using the term in its broadest sense, biotechnology can be traced to prehistoric times, when hunter gatherers began to settle down, plant crops, and breed animals for food. Ancient civilizations even found that they could use microorganisms to make useful products, although, of course, they had no idea that it was microbes that were the active agents. About B.C.E. 7000, the Sumarians and Babylonians discovered how to use yeast to make beer, and winemaking dates from biblical times. In about B.C.E. 4000, the Egyptians found that the addition of yeast produced light, fluffy bread instead of a thin, hard wafer. At the same time, the Chinese were adding bacteria to milk to produce yogurt.

Scientists began cutting and pasting bits of DNA together in the 1970s, in research that rapidly gave rise to a new era in biology in which genes could be spliced into the DNA of bacteria and other organisms. Many of the early breakthroughs and the first true biotechnology company, Genentech Inc. started on the West Coast. But Cambridge rapidly became a hub for the new industry, benefiting from the brainpower at nearby universities and from debate over the new kind of research.

Key Technical Developments

Advances in biotechnology were marked by the development of key research techniques. In 1976, Herbert Boyer and Robert Swanson founded Genentech, the first biotechnology company to use recombinant DNA technology in developing commercially useful products such as drugs. The year 1977 is considered the "dawn of modern biotechnology," for it was in that year that the first human protein was cloned and manufactured using genetic engineering technology.

Patents and the Rise of Biotechnology Companies

In 1980 the U.S. Supreme Court provided an important incentive for the development of biotechnology companies. Thus, private companies could look forward to making substantial profits from therapies that they developed through genetic engineering techniques.

Among the new companies to take advantage of the court ruling was the Chiron Corporation, which cloned the protein that formed the outer coat of the human hepatitis B virus.

Biotechnology has also been successful in development of other useful products. Today many laundry detergents contain proteases, enzymes that remove stains by digesting the protein components of the stain. However, such enzymes are inactivated by bleach. In 1988 the biotechnology company received approval for a bleach-resistant protease. This had been accomplished by isolating the gene for protease and then, using site directed mutagenesis, changing the gene such that the corresponding protein was no longer sensitive to inactivation by bleach.

Biotechnology has also made a great impact in agriculture. The first genetically engineered plant was patented in 1983. The first genetically engineered food was produced by a company called Cal gene, in 1987. Cal gene, now a part of Monsanto, produced a tomato that could be ripened on the vine and transported ripe to market. Tomatoes are normally shipped green to market and left to ripen at their destination because they are easily bruised and damaged if shipped when fully ripe. Today there is a new "green revolution" under way, in which genetically modified food will provide greater nourishment and higher yields, while simultaneously reducing the use of fertilizers and herbicides. Although there is considerable controversy surrounding these foods (sometimes referred to as "Franken food"), there have been no documented cases of anyone being hurt by eating them. In 1990 the biotech firm GenPharm created a transgenic dairy cow into which the genes for human milk proteins were inserted. The milk from such cows will be used for producing infant formula.

Opportunities available in the Biotech Industry:
BIOTECHNOLOGY

Students with B.S. (or A.B.) and M.S. degrees can find numerous positions in which they do hands-on work at the lab bench. Such work may involve research and development, production or quality-control testing. Students interested in helping to formulate company policy, helping to choose company research directions or running a research project involving multiple scientists are likely to need a Ph.D. Some companies will subsidize (or pay for entirely) additional education for employees with B.S. degrees who wish to obtain an M.S. (or M.A.) degree at a nearby university.

Students interested in biotechnology should develop a strong background in areas including genetics, molecular genetics, cell biology, biochemistry, and microbiology. These fields are mostly represented within Area 1/A of the advanced courses for the Biology major. However, two other courses that are particularly relevant are the Laboratory of DNA Manipulation (Biol 437) and Plant Biology and Genetic Engineering (Biol 3041). In addition, interested students should gain as much real-life laboratory experience as possible, earning Biol 200 and Biol 500 credits while pursuing an independent research project in a lab that uses the techniques of molecular biology. There are approximately 300 laboratories on the Hilltop and Medical School campuses that together form the Departments of the Division of Biology and Biomedical Sciences. The vast majority of these labs utilize the general tools of molecular biology while applying these tools to investigate a variety of biological processes and phenomena. It must be emphasized that with the tools of molecular biology (DNA, RNA and protein purification and analyses, DNA cloning, DNA sequencing, etc.) one can study a variety of problems in virtually any organism. Therefore, it is not as important to work on any one research problem as it is to gain basic training in the tools of the trade. Molecular Biology is both a science and a craft for which one must develop "good hands" at the research bench. As in any trade that requires skill and creativity, one develops "good hands" only through experience and practice. The biotechnology industry, and graduate and medical schools, preferentially accepts students who develop these skills, can work independently with minimal supervision, and can obtain strong letters of recommendation from their research mentors.

Business-Finance and Marketing

Supporting the scientific research endeavor is another industry in which students with a good background in biology and business can excel. The biotechnology industry needs people who combine management skills with knowledge of the biological basis of their industry. This industry supplies equipment, supplies, and reagents to labs within the universities, hospitals, companies and government agencies in which scientific research is conducted. Many salespeople in this industry must meet one-on-one with laboratory managers to sell their products, and first-hand knowledge of the uses of, and scientific bases for, the products they sell is a strong advantage in this competitive area. Biology students may want to consider a minor in business or economics to position them to excel in this industry, either in sales or management.

Biology majors specifically interested in finance or marketing may complete a second major in one of these areas by taking a minimum of 24 credit hours of courses through the Olin School of Business. General requirements for a second major in either finance or marketing include MGT 100 (The Managerial Environment), MECO 290 (Microeconomics; or substitute Econ 103B plus Econ 401), QBA 120 (Managerial Statistics I, or substitute Math 2200 or 320, Psych 406, SSM 325 or SSM 326), QBA 121 (Managerial Statistics II, or substitute Econ 413, Math 439 or Psych 407), ACCT 2610 (Principles of Financial Accounting) and ACCT 2620 (Principles of Managerial Accounting). Additional requirements for the Finance second major include FIN 340 (Capital Markets and Financial Management), FIN 442 (Options Pricing), either FIN 447 (Information Flow in Financial Markets) or FIN 448 (Advanced Financial Management), and at least two other advanced finance electives. Additional requirements for the Marketing second major include: (1) MKT 370 (Principles of Marketing), (2) MKT 480 (Marketing Strategy - Spring semester of senior year), and (3) at least three of the following, with at least one course from group A. Group A: MKT 377 (Consumer Behavior), MKT 470E (Pricing), MKT 473 (Marketing Research); Group B: MKT 373 (Retail Management), MKT 470 (Advertising Management), MKT 476 (Advanced Retail Management), MKT 477 (International Marketing).

Also possible is a five-year joint-degree program in which students can earn an undergraduate degree and an M.B.A. (Master of Business Administration) through the Olin School of Business. A desire to pursue this program should be indicated in the sophomore year, with formal application occurring in the junior year.

FUTURE OF BIOTECHNOLOGY

Back in the 1980s, when the idea of the Human Genome Project was first proposed by a handful of biologists, the overwhelming reaction was negative, with scientists arguing that it would be prohibitively expensive and would consume too much time and resources. Only a handful of genes had been sequenced, at great expense, and many felt that a crash project to sequence the entire human genome would be impractical and adversely affect funding for other worthwhile projects.

Today, we realize that many of these pessimistic predictions were incorrect in part because of Moore's Law. The biology of gene sequencing has now been automated and robotic zed, with the power of computers doubling every 18 months and results being shared instantly on the internet. This is one of the most important factors driving the ever-accelerating pace of biotechnology. This, in turn, has translated into a new Moore's Law for biotechnology: that the number of genes which are sequenced doubles every year. This means that the cost of sequencing a DNA base pair went down from $5 per base pair to a few cents today. Within 20 years, we may have personalized DNA sequencing and also an "encyclopedia of life" in which all major life forms are decoded.

This new Moore's Law, in turn, allows one to make rough predictions about the progress of biotechnology into the next 20 years. Although predictions mentioned here are inevitably based on incomplete information, they will hopefully serve as a useful guide to make plausible projections for the future.

Global Biotechnology Center, Boston

In recent years, the biotechnology industry in the United States has enjoyed unprecedented numbers of product approvals, steadily increasing revenue, and strong financing totals. In turn, the market has rewarded some companies for introducing products and achieving revenue growth and profitability. The payoff, however, has not been as evident for early-stage companies and their investors.

Since the genomics-fueled IPO ''bubble'', investor skepticism has raised the bar for companies trying to go public. Proof of concept in the lab is no longer enough, as most companies must now show positive results in human trials. Even with such data, the valuation of companies is often muted, resulting in venture capitalists being squeezed — they must fund early-stage companies for longer periods, but the payoffs at the time of the IPO don't increase commensurate with the additional risk.

Last year brought some relief with an increase in mergers and acquisitions and values among the highest in history. Unlike other big merger and acquisition years in the industry's history, the high deals weren't driven by a single mega-transaction, but rather by a number of large deals, and a growing recognition among buyers of the value in biotechnology's platforms and pipelines. Competition drove deal premiums to unprecedented levels in 2006 and, in a reversal of recent trends; big pharmacy buyers gravitated toward early-stage technologies, investing in the next generation of biotechnology innovation to improve their own drug-product pipelines.

The higher values paid by strategic buyers should bode well for the industry and lead more investors to recognize the value of innovation.

HYPE ABOUT CAREERS IN BIOTECHNOLOGY

Read recently in a popular annualized directory of careers that the bio-pharma industry is superhot. In fact, the publication goes on to say that if you are a biologist--B.S., M.S., or Ph.D.--you will be earning a midlevel salary of $93,000. According to the directory, salaries, benefits, and work hours in biology are among the best for any career choice and in any industry.

In fact, nothing about biology jobs in that publication rings true. Although some senior scientists with special expertise might earn more than six figures, they are not in the majority. Perhaps the authors forgot about the many postdocs earning $30,000 and an equally large number of B.S.-level research associates running assays for $40,000 a year.

Wouldn't It Be Nice If You Could Trust What You Read?

The moderator for the Bio.Com career discussion forum says that the results of this hype every day in messages from IT industry people--potential crossovers who believe that they are simply one biology course away from a high-paying career in bioinformatics. They are attracted to the biotech industry because countless newspaper and magazine articles have painted the field as the latest gold mine for those who can combine IT skills with a background in biology. They are shocked to find out that bioinformatics employers are looking for Ph.D.s.

The reality of the job market is that biotech companies hire in very specialized niches, and smaller fields such as bioinformatics have subcategories of their own. The bio-pharma industry is one in

which the niche career particularly rules. More broadly, biotechnology involves individuals with careers as different from each other as are a microbiologist's and a chemist's.

Unfortunately, the biotech industry sometimes contributes to the hype. A national publication in the life sciences recently quoted a vice president at the Biotechnology Industry Organization (BIO) as saying "the industry is becoming increasingly concerned about a shortage of trained scientists across the board." The article went on to suggest that people with botany degrees are in great demand!

Has anyone reading this article tried to get a high-paying job in the biotechnology industry with a botany degree? Media misinformation like this can be harmful, because young scientists are making career decisions based on these articles. They are choosing academic programs or zeroing in on a career completely unaware that their research has led them to inaccuracies.

With all this hoopla, making good career decisions becomes a still more difficult task.

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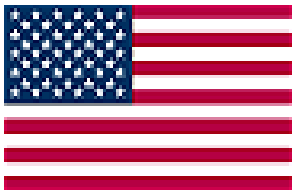
THE REAL ESTATE TITLE INSURANCE INDUSTRY IN USA



Shawn M. Miller
Miller Examining Service, Inc.
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The real estate title insurance industry in the United States is born out of our founding fathers desire for private ownership of property and defending property owner rights from other citizens and the government.

Real estate title insurance is a guarantee that you are the legal owner of a property and it states all restrictions, easements, leases, mortgages, liens, right of ways and all other recorded documents that affect your particular property.

Obtaining title insurance is the only way to protect your ownership rights to a piece of real estate. When you purchase your property, you need to be certain that there are no issues with the property's title and that the seller is in fact the current and full interest owner of the property. Title Issues limit your enjoyment as well as your use of the property and can cause you significant monetary losses. Having a properly conducted title search and obtaining title insurance based on that search is the only way to protect one's self in a real estate transaction.

When you have had your offer to purchase a property accepted by the seller, a title professional such as myself will research the appropriate public records in order to determine if there are any issues or "clouds on" the title. These records include local county records including recording division, civil court, domestic court, probate court, as well as bankruptcy court records, federal court records. This real estate title search should be a minimum of 42 years back for residential properties and usually 60 to 100 years back for commercial properties. According to the American Land Title Association, more than 1/3 of all title searches reveal a title problem.

When purchasing real estate, it is vital that you protect your rights regarding this new asset by obtaining an owner's title insurance policy. This ensures you against: document errors or omissions, mistakes on title exams forgery by anyone in the closing process, unknown heirs or others who had an unknown interest in your property. An owner's insurance policy will insure you against damages arising from mistakes in your title search, or errors and omissions in the public record. This insurance will also provide you with access to an Attorney free of additional charge to represent you in court on any real estate title issue. Unlike most insurance, a real estate title policy has a one-time fee for coverage.

If you take out a loan in order to purchase a property, the bank or mortgage company must also be protected by real estate title insurance on the property. The Loan Policy is for the amount loaned for the purchase of the property. The Loan Policy coverage decreases as the amount of the loan balance owed decreases.

Title issues can reveal themselves in many different forms. In many cases, forgery and fraud are often not detected until after the closing. Conflicting wills can create title issues of ownership as well as rights to sell the property. Easements, right of ways, deed restrictions missed on the title exam limit the property use. Fraudulent prior sales may not be discovered until after you purchase a property. All of these vital issues underscore the importance of obtaining a title insurance policy in order to protect your ownership rights.

My family's real estate research business is Miller Examining Service, Inc. Established in 1981, our company is the first incorporated independent title examining research company in the State of Ohio, U.S.A. We are headquartered in Akron, Ohio and service the Summit and Portage County, Ohio

real estate title market. Our clients are title insurance companies or real estate attorneys who need our title exams in order to provide their clients, the buyers or sellers, with the title insurance needed for a real estate transaction. We carry errors and Omissions insurance for our client peace of mind and as required by the State of Ohio. We service the Summit and Portage County, Ohio real estate title market. Commercial searches are a specialty of our company because our company President Charles Miller has over 44 years experience in this industry. My position is Vice President of Operations and Senior Examiner. I perform real estate title searches and assign our office's workload as well as handling client relations and coordinating document recordings at the end of the closing process.

The closing process is when your ownership journey for property begins.First, your offer is accepted by the seller and you and the seller sign a purchase agreement. In the State of Ohio, a married person's spouse has dower rights and should sign the purchase agreement even if the property will be titled in only the first spouse's name alone. Not all states have dower rights. Second, if you are buying the property with a loan from a bank, you will be required to pay for a Lenders Policy which covers the bank or mortgage company that gives you the loan. Please note that the lenders policy does not protect or insure the owner of a property, it covers the mortgagee or lender only. You must purchase an Owner's Policy to protect yourself from any unforeseen title issues. Third, the Title Company, chosen by the buyer or the seller, will order the title search and any inspections that were agreed upon in the purchase agreement. The title company will contact my company to order the title search. We complete the title search and send it back to the title company. Fourth, the title company creates the commitment for title insurance and provides it to the interested parties. Any title issues are dealt with at this time before the deed is signed by the seller and the mortgage is signed by the buyer. The title company also holds all the money from the buyer and seller in an escrow account and makes sure that all fees and expenses regarding the transaction are paid according to the contract. Fifth, the seller signs a new deed to the buyer. The buyer signs the mortgage. The title company sends these documents to my office to be recorded when they have received the money from the buyer, seller, and the bank. Finally, the title company receives its funds and the closing date from the purchase agreement arrives. The title company calls and gives me the go ahead to record the documents after updating the title report. We update the title report to make sure that no issues have been found in the public record since our original title search report. If no issues are found, we record the deed and mortgage with the local government office.

In the U.S.A., you are not the record owner of a property until the deed putting the property into your name is recorded with the local government office, usually called the county recorder's office. In Summit County, Ohio, the recorder's office was merged with the auditor's office and treasurer's office to form the Summit County Fiscal Office.

In Conclusion, I would like to reaffirm that real estate title insurance protects our property ownership rights. Even if you purchase a property with cash, always buy an Owner's Title Insurance Policy to protect yourself from issues with your property's title. Title Insurance makes banks willing to loan money to creditworthy buyers for purchasing property thus enabling our ability to finance property instead of solely purchasing property with cash.

Public records for all property in the U.S.A. are maintained by the local government as well as the state and federal government in order to allow for the protection of citizen's property rights.

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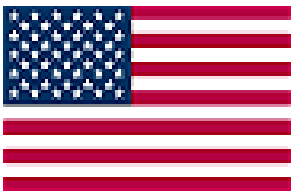
HEALTH INSURANCE PORTABILITY AND ACCOUNTABILITY ACT OF 1996 (HIPAA)



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Introduction

The Health Insurance Portability and Accountability Act of 1996 (HIPAA) was put forth by congress broadly divided into Title I which gives health care access, portability and renewability. Title II deals with preventing health care fraud and abuse, administrative specifications and medical liability reform. Privacy rule of HIPAA came into effect on April 14th, 2003, established regulations for the use and disclosure of Protected Health Information (PHI). A covered entity may disclose PHI to facilitate treatment, payment or health care operations, while notifying individuals the uses of their PHI. If privacy rule is not being upheld individual can file a complaint with the Department of Health and Human Services (HHS) Office for Civil Rights (OCR).

Background

The research paper details about health information privacy which is a HIPAA privacy rule protect the privacy of individually identifiable health information, and the confidentiality provisions of the patient's safety rule. The law which governs the privacy in health care, personalization of health care through health information technology, standard reporting and maintenance of electronic health records are dealt. Further the paper discusses important issues concerned with privacy in aged care, the impact of privacy in genetic testing, bio-bank research and how to balance public health with privacy when performing cancer surveillance. Finally the paper discusses issues relating to historical research in health care because the privacy rule directly affects medical archivists.

Research

The sources which I researched in writing the paper are electronic journal articles and few websites. I have selected these articles because they give in depth information about the privacy issues in United States regarding health care. The article HIPAA privacy regulations gives an introduction to the privacy issues, when it started and explains about specific regulations designed to protect the privacy of an individual's health records such as development of facility or practice specific privacy policies. The development of privacy manual staff training on privacy policies and procedures and drafting a notice of privacy practices. The next article, patient privacy – a consumer protection approach explains the importance of how a consumer protection approach rather than a right to privacy approach can be used to develop a coherent, practical approach to the needs of various parties in the health care system of the United States. The article, Advancing Personalized Health Care through health care information technology forms a basis for community's personalized health care work group. This gives information about why such a work group was formed and to determine what is needed to promote standard reporting and incorporation of medical/genetic/genomic tests and family health history data in electronic health records. Going further the article selected is health information reconciling personal privacy with the public good of human health provides a need for the public health law because during that time there were no adequate laws or constitutional principles to help guide a rational privacy policy and there should be a case study showing the important tradeoffs that exist between public health and privacy.

The article privacy in aged care of Australia shows the extension of privacy law to cover private sector providers and the proposal of the national health privacy code deals with privacy issues in aged care policy and practice. This article can be compared with the privacy practices in aged care in United

States which is more a residential act, drawing on theoretical, policy and practice. The article ethics, policy and educational issues in genetic testing introduced into health care services. It also provides knowledge regarding policy and practice in order to minimize risk for harm, protection of rights of individuals and families and societal context in the management of genetic test results. Moving on the article bio-bank research and the right to privacy explains how does privacy mean in relation to bio-banking and in what way do the participants have an interest in privacy, and how should a privacy issue be regulated when it comes to bio-bank research. The article discusses the promotion and protection of the rights of the participants in bio-bank research and it argues their interests related to the specific context of the provision and the reception of health care connected with the bio-bank research. The article cancer surveillance and information: balancing public health with privacy and confidentiality concerns provides important information about achieving a proper balance between measures to protect privacy and the ability to guard and improve public health requires careful consideration and development of appropriate policies, regulations and the use of technology. Because rapid advances in informatics and communication technologies are greatly expanding for information capture and transportation, the area of concern are these tools can be used for good, they also offer new opportunities for those who seek to obtain and use information for improper purposes. Finally the article included is the access anxiety: HIPAA and Historical research. Because the privacy rule directly affects medical archivists and their collections, it has significant implications for historians of health care. According to privacy rule the researchers must satisfy specific requirements to gain access to individually identifiable health information held by HIPAA protected institutions.

Discussion

The Health Insurance Portability and The Accountability Act of 1996 influences all health care professionals including speech language pathologists with regards to specific regulations designed to protect the privacy of an individual's health records. The covered providers take reasonable steps to limit the use and the disclosure of protected health information. The purpose of HIPAA privacy rule was implemented because of the advent of electronic medical records and data bases created an environment ripe for abuse and error. The rule is to safe guard and to protect the confidentiality of medical information and to provide individuals with resource if their privacy rights are violated. The administrative simplification provisions are provided to improve the efficiency and effectiveness of the nation's health care system by encouraging the widespread use of Electronic Data Interchange in health care (EDI). The EDI rule sets standards for the electronic exchange of administrative and financial health care transactions that involve transfer of health care information for specific purposes, streamlining the flow of information, improving quality of data exchange, lowering administrative cause, eliminating data task and redundancy. The data security rule applies only to Electronic Protected Health Information (E-PHI) including information that a covered entity creates, maintains, transmits or receives. All health care providers and organizations are eligible to receive National Provider Identifiers (NPIs) effective May 27, 2007. Health providers and organizations that are defined as covered entities under HIPAA will be required to have an NPI in order to identify themselves in HIPAA standard transactions. Both civil and criminal penalties are imposed if found guilty for violating HIPAA regulations. According to PHI, individually identifiable health information includes demographic data that relates to the individual's past, present or future physical or mental health condition; provision of health care to the individual or past, present or future payment for the provision of health care. The HIPAA regulations place no restrictions on the use or disclosure of D-identified health information. If there is no reasonable basis for identifying an individual, it is called deidentifiable information. Therefore does not identify specific individuals. Finally once the privacy policies are developed, Notice of Privacy Practices (NPP) is required. The NPP should be written in plain language that describes how the provider may use and disclose PHI, the patient's rights including how to complaint about a private entity's privacy practices, the legal duties of the covered entity with respect to privacy of PHI.

Under the civil rights there is a complex and comprehensive privacy act (5 USC 552a) effective for federal data banks which include huge Medicare and Medicaid programs. The privacy act essentially requires all federal agencies to publish the name of every data bank they keep procedures to ensure accuracy of all entries, release them to the person whom they concern and transfer them only to authorized recipients. Data systems maintained by states, multi state groups, insurance companies or health maintenance organizations (HMOs) are not covered by the privacy act, only medical data banks are covered. In the complex system of modern medicine, one is forced to reveal highly sensitive personal facts in an environment where he/she has no bargaining power. There is an opportunity for the medical community to extract maximum of information with the minimum of safe guards. So a consumer protection approach to medical data privacy is apt. these practices, while satisfactory to the data gatherers may neither be socially efficient nor compared with the dignity of the individual. The individual should be accorded the right to control the informational personality that he or she is forced to divulge. The health system if requires an individual to surrender privacy in return for contractual or other benefits is important in any private sector consumer protection analysis of medical privacy. In constitutional analysis, virtually any constitutional rights can be waived, but normally not considered waivable in the context of a private contract. Hence in the field of medical information, this will be a problem because the power of medical industry is more than sufficient to reduce the consumer rights to the minimum standard allowed by law. In order the rights to be effective the patient (consumer) must have adequate access, correction and knowledge of to whom the records are transferred. Therefore the consumer protection approach to medical data privacy is the most important issue that the patient must access the widespread existence and interchange of accurate medical information for legitimate ends. Except for the most sensitive issues like abortions, terminal influence he or she may not be protected from dissemination to those with the commercial "need to know". This would allow distribution of medical records to third party payers. So a consumer protection approach rather than a right to privacy approach can be used to develop a coherent, practical approach to the needs of various parties in the health care system of the United States.

High quality data are needed to help consumers to make informed choices amongst health plans and providers to provide more effective clinical care , to access the quality and cost effectiveness of health services and patterns of morbidity and mortality among underserved populations and to research the determinants, prevention and treatment of disease. Because health information is the most intimate, personal and sensitive of any information maintained about an individual. There are simply too many opportunities for use of health data in ways that are inconsistent with the desires of individuals for privacy. As the United States intensely considers the values and effectiveness of its health care system, one of the burdens of achieving cost effective and accessible care is the loss of privacy. In exchange for individual rights, the government created reasonably strong assurances of fair informational practices, without losing the benefits of a health information system. To promote standard reporting and incorporation of medical genetic/genomic tests and family health history data in electronic health records. The personalized health care work group of the American health information community was formed and clarified a range of issues relating to information, including interoperability standards and requirements for storage, transmission and use in clinical decision support. Advancing health information technology standardization and adoption was developed to provide and adopt a diverse range of health information technology products throughout the health care sector. This process provides context for detailed policy discussions, standards, harmonization, certification considerations and architecture specifications necessary to advance the national health information technology agenda. The work group provided return materials that discuss confidentiality, privacy and security issues as they pertain to genetic/genomic information in the EHR. Additionally the group described how to mask genetic/genomic test information in the health records rather than a standalone issue.

Privacy issues in aged followed in Australia include physical, psychological and social dimensions; it is informational privacy that is the focus of health care. The management of privacy

issues in aged care at both public and private levels. Aged care organizations are accredited according to their commitment to maximizing client's privacy and dignity. At a private level aged care workers manage privacy issues every day in their relationship with older consumers. The aged care workers enter patient's homes and rooms, negotiate access to their personal space and at times touch private places of their bodies and therefore in aged care delivery, body care that is most private of activities become a public act. The physical privacy in aged care revolves around the construction, physically and socially, of the home and the room. In aged care policy and practice, physical privacy is most often considered in relation to residential care. In United States certain rights and responsibilities are introduced Aged Care Act, 1997. It outlines residence responsibilities in relation to other residents, staff and the residential aged care service community as a whole.

The ethics, public policy and education issues that arise in United States when genomic information acquired as a result of genetic testing is introduced into health care services arise conflict with current practices because unresolved issues including protection of privacy of individuals prevails. These require genetic information needs of family members, determination of appropriate monitoring of genetic tests, addressing genetic health care discrepancies and assuring appropriate work force preparation. Inherited disease, for example, familial polyposis, a family history is required. Therefore a contact between a professional care provider and a family usually includes obtaining the family medical history. When information gathered in clinical setting, extending family members whose details are recorded on the family tree are unaware that their personal information is being discussed. So, factual information without family member names can preserve privacy of people who are not providing the information. It also can be ethically challenging to the health care provider, if patients withhold consent to share information that would be helpful to relatives. The principle of confidentiality them conflicts with the ethical concept of preventing harm. But unless serious harm exists, opinions in the US do not support disclosure without permission. Moving further the bio-bank contains different biological material used for their research. They are setup and designed to study the health effects of genetic predispositions, environmental exposure and the interplay between genetic and environmental factors. The bio-bank research is comprised of genetic data and health data, contain information concerning both heredity and environmental factors for a large number of individuals, they give researchers the ability to find factors that put the group of people at risk or may allow them to avoid diseases with complex causes of development. Genetic privacy has intrinsic value as a facet of autonomy, and respect for autonomy implies a duty to respect the genetic privacy of others. Legally genetic privacy must be considered a fundamental right and individuals should be able to block or seek any invasions of their genetic privacy by other people and by the government. In the context of bio-banking, adequate privacy protection could be reached by making bio-bank institution into charitable trust that establishes a kind of partnership with the research participants regarding the ownership of the bio-bank material. Then the individuals are seen as owning their genetic material in terms of steward ship. Because individuals are viewed as stewards over their bodies, possessing themselves in trust rather than out right owners. Therefore instead of granting participants an exclusive right to or ownership of their health information must be waived in order to make bio-bank research possible.

The practice of public health has included identifying persons with disease for the purposes of treatment and cure, interruption of transmission and finally irradiation of the cause. Methods of achieving each of these goals have almost always included some amount of release of private information, whether through creation of medical history, disease reporting system or in the course of research into cause and cures. In cancer of cancer surveillance and research some instances of unintended interference due to differences of interpretation may be resolved by clarification, education and occasional modifications. Considerations must be made so that appropriate protecting measures are in place in state laws to protect disclosure of confidential cancer surveillance data. Hence an environment where both privacy and the communal good are valued must be created while collection of information to improve health care and public health at large.

Finally I would like to conclude the research paper by discussing anxiety expressed by the medical archivists in order to access patient data for historical research. Archivists of medical collections at major research universities have to deal with the regulation surrounding protection of individual health information under HIPAA privacy act. Because administrative courts governing privacy and confidentiality that affect document collection preservation and research access.

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A STUDY ON ANALYSING THE IMPACT OF CROSS-CULTURAL FACTORS AFFECTING THE IT INDUSTRY

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ABSTRACT

India has become a part of global economy, Indian organizations are competing globally. The organizations should have culturally diverse teams. Culturally diverse teams are capable of producing superior when compared to homogenous teams. This paper is going to discuss about the cross-cultural issues affecting the IT industry. Decisions in the workplace are influenced by cultural view points and beliefs. The employees with different culture will see problems in different ways and will not come up with similar solutions. Employing people with less cultural competency will damage business relationships and deadlines can be missed, projects may fail. Lack of cross cultural sensitivity will give a negative impact on employee morale, teamwork and turn over. The cross-cultural team's work virtually communicating through tools like internet, intranet, and web based tools, e-mail, etc. When working globally, the cultural differences between teams will create misunderstandings between team members. The manager's role is to coordinate and build trust between the team members. Cultural training assists teams in maintaining good relationship in the global environment. By analyzing on the data collected the ways of managing cross- culture environment can be better understood.
Keywords: Cross-cultural factors, virtual teams, cross-cultural training.

INTRODUCTION

Culture refers to the fundamental values and norms that a group of people-such as ethnic group, a nation, a corporation, or some other organization or profession holds or aspires to hold. Every culture distinguishes from others by the specific ways it prefers to solve certain problems such as those that arise from relationships with other people, from the passage of time, and in dealing with the external environment. Diversity is the similarities as well as the differences among and between individuals at all levels of the organization and in society at large.

Figure 1: Cultural model

Culture is programming of the mind. As we grow we are taught to do things in a certain way, we are taught what is right and wrong and how to behave and what acceptable behavior in different situations is. We learn what is important, what to value; all of this makes up our culture.

Human Nature

It is considered the deepest level and is based on common biological reactions such as hunger, sexual drive, and territoriality. Because of human nature there are many behaviors and understandings that people share, even though they come from different culture.

Culture

It is based on the common experiences that we share with a particular group of people. Cultural values, attitudes and behavior give us something in common with a definable group of others but not with all of them.

Personality

It is considered the shallowest level and is based on the specific genetic make-up and personal experiences that make each of us a unique individual. For example we may be extraverted or introverted, aggressive or submissive, emotional or stable. Because of personality, there are many behaviors and understandings that will be quite different between different people even though they come from the same culture.

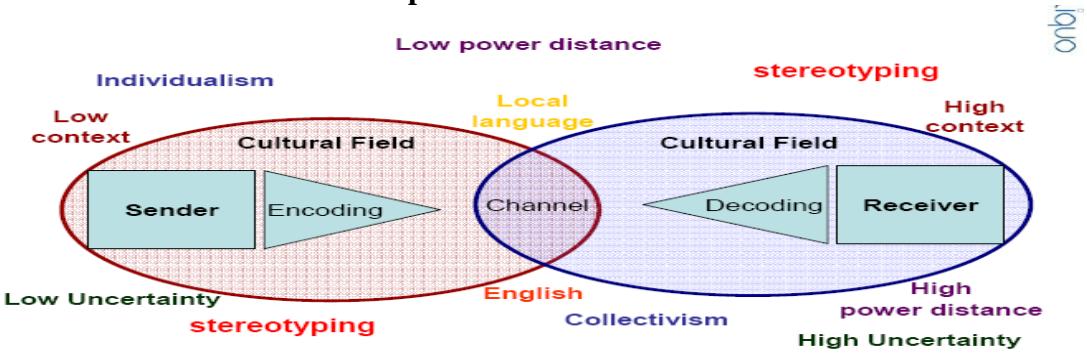
India has become a part of global economy, Indian firms are competing globally. Some Indian firms are becoming diverse slowly. Cultural diversity can be seen in the Indian IT sectors nowadays. But whole heartedly India has not embraced the cultural diversity. A vast majority of Indian firms are still cultural monotypes. Not having a culturally diverse firm will be a series handicap for Indian firms when they want to expand globally. The organization should be culturally diverse as the market serves then only it can compete effectively on a global scale and succeed. Indian firms have to create a diverse workforce. The challenge for the firms is to manage this diversity. To overcome this we have to have a proactive diverse policy. A well managed diverse work force can create new growth opportunities and innovation that the organization never imagined before.

Cross-cultural factors

Communication

The quality of communication is the key concern in cross-cultural teams. There are two types of communication verbal and non-verbal. Verbal communication is sending and receiving messages with words including writing and sign language. Non-verbal communication includes facial expressions, eye-contact, tone of voice, body posture and motions positioning within the groups

Figure2: Cross-cultural communication process



The cultural field represents culturally based elements in the senders and in the receiver's background, such as their language, education, and cultural values. It is these cultural fields that create the codes used in encoding and decoding and cultural conventions affect the communication process. These fields are referred as cultural noise. When encoding, decoding and interpreting it is this cultural noise that acts as a filter through which all messages, both verbal and non-verbal, passes.

Cultural noise include, but it is not limited to, stereotyping, language, non-verbal communication, cultural value dimensions, high and low context communication, time orientation and evaluating behavior from one's point of view.

Concepts of time

Time management can be categorized into two concepts: monochromic and polychromic time. People with monochromic concept of time assume that they can control time and prefer punctuality. Those who have polychromic concept of time interactions with other people carry more weight than sticking to a schedule. Time plentiful cultures tend to rely on trust to do business. Time-limited cultures don't have time to develop trust and so create other mechanisms to replace trust.

Group dependence

The difference between individual and group- dynamics is one of the most important aspects influencing cross-cultural communications in business. Individualism emphasizes "the importance of individual identity over group identity, individual rights over group rights, and individual needs over group needs. As for groupism the opposite is true. It emphasizes the importance of the 'we' identity over the 'I' identity. That is the group is more valuable than the individual.

Hierarchy

Different cultures often view the distribution of authority in their society differently. Geert Hofstede, the Dutch international business researcher, has called this dimension of cultural variation "power distance," defining this as "the extent to which a society accepts the fact that power in institutions and organizations is distributed un

Openness to diversity

Cultural values differ depending on the country, religion etc., for example some religion may be future looking and observe hierarchical relationship and in some they respect tradition.

Physical space

Employees working as a team need space and privacy for personal comfort.

Relationships

Building relationship varies among different cultures because of difference in communication styles and power relationships.

The concept of in-group and out- group is one of the critical factors to take into account when building relationships with Asian business people. In-group people are close to family, relatives and friends, while people such as bosses and strangers are out-group people.

Status- attainment

The way we perceive status or react to status in cross- culture varies from culture to culture.

Ascribed-status

This refers to cultures that base status upon external qualities such as age, wealth, education or gender. If one has the right external characteristics status is ascribed to them. In this culture there is little room for others to gain through actions and achievements.

Achieved status

Achieved status is earned. Internal qualities are valued more than external ones. Therefore status is achieves through accomplishments such ad hard work and contributions to a community or company.

In this type of culture status is malleable, it can be lost as quickly it is gained and status can shift to other individuals. In cultures where status is achieved information usually flows easily between ranks.

Tolerance of change

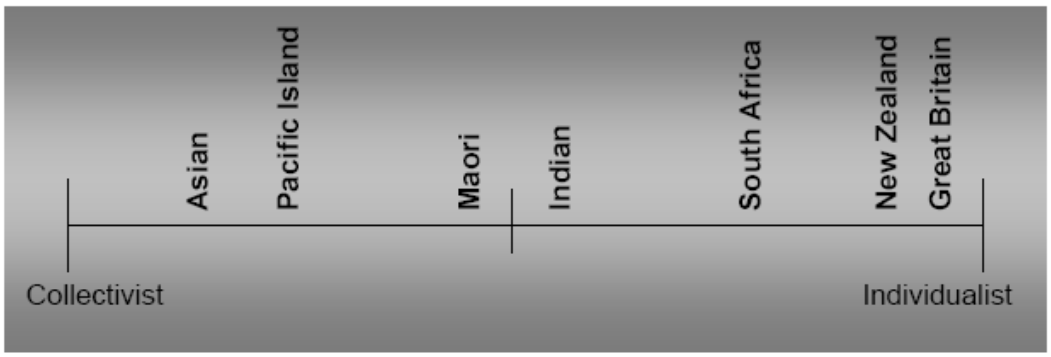
Readily accepts change, taking more and greater risks. Resistance to change is positively associated with decision making skills. An employee with low tolerance of change will not be able to develop new skills and behaviors that are required in new work setting.

Cross-culture affects in decision making

Decisions in the workplace are influenced by cultural view points, beliefs, assumptions and values. In a culture that is future oriented, with strongly held beliefs about people's ability to learn and change, the human resource manager can create programs with the goal to be more productive and efficient.

In a hierarchical management style major decisions are made by a senior level manager. Employees are uncomfortable with independence on the job and act depending on the senior manager's decision. Some countries prefer participative decision making utilizing opinions from multiple levels of management and this decision making process stimulates group harmony, conformity and togetherness.

Figure 3: Collectivism Vs Individualism



People from collectivist cultures primarily view themselves as members of groups and collectives rather than as autonomous individuals. They are concerned about the effects of actions of their groups. Activities are likely to be taken in groups and on a more public basis. Decisions are made on a consensus or consultative basis and the effects of the decision on everyone in the group are taken into account.

Cultural bias influencing performance appraisal process

Lack of cross-cultural sensitivity in the performance appraisal process can result in negative impact on communication, employee morale, teamwork and turnover. India is a collectivistic or high context culture so group harmony and interpersonal relationships are highly valued, so it is recommended to give feedback in a manner that is subtle, indirect and non-confrontational.

Risks involved in employing cross-culture employees

Culturally different employees have very different ideas of what it means to be a good employee. If the employee comes from hierarchical culture he will do only the tasks given to him. Managers from individualistic culture might view the employee as lacking initiative, but the employee think that he is fulfilling the definition of good worker.

When employee have less cultural competency, it can damage business relationships, deadlines can be missed, projects may fail and talented people will go to the competition.

Cross-cultural training

Organizations when become cross-border entities, cross-cultural factors affect every aspect of the business. Misinterpretations and misconceptions are common when the same situation is viewed differently by people from different cultures. The basis of intercultural relations are not about changing other people, but adapting oneself to another culture. Cross-cultural training will equip the employees with skills to do business in global environment. Cross-cultural training can be divided into three categories education, actual training and coaching. Education helps to understand how culture affects as individuals. Training is conducted looking at the way companies manage their workforce. Coaching stage includes consulting, including that for particular projects.

For example in a BPO Industry, where India has to interact with US-based client's everyday. "While searching for the answer to a query, the agents normally keep the call on hold; this is considered rude by the clients, because the call centre agent is expected to keep chatting. While silence is considered an insult in some cultures, it shows respect in another.

Tools of communication between multicultural virtual teams

Virtual Teams

A virtual team is defined as connecting a group of people who work towards a share purpose interdependently, across geography and time zones using technology. One of the most significant potential boundaries for virtual team is culture. Everybody has to be on the same wave length as far as information and data goes. In the international virtual team with its cross-culture mix of people there will be some amount of ambiguity that will creep in. The teams working on a project without regular face-to-face interaction should have written email communication or telephonic conversation as clear as possible. Care has to be taken in wordings when there is a disagreement on an issue. Improved tools of communication like Internet, Intranet, telephone, e-mail, use of web based collaborative tools, etc., have made the task of forging relationships between multiple teams easier

There is a software called' Groupware', this allows to access to a shared database, provides email services, allows sharing of work files, allows online chats, scheduling and tracking of joint projects.

Manager's role in promoting diversity

Companies more and more get into touch with members of various national cultures. The work of manager is influenced by development of "global" economics and it is necessary to focus on the ability of managers to manage a company in cross-cultural conditions. Cultural differences in cross-cultural teams can create misunderstandings between team members. Thus building trust is a critical step in creation and development of such teams. As a manager of cross-cultural team, building trust between different people is a complex process.

Conclusion

Culturally diverse teams are capable of producing superior performance when compared to homogenous teams. Organizations around the world are recognizing the value of a culturally diverse team and are actively promoting diversity. However care must be taken to ensure that the team can perform by removing mistrust, misunderstanding, miscommunication, stress and lack of cohesion.

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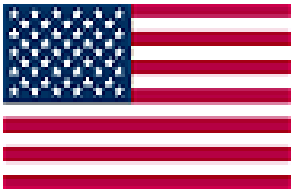
SUBPRIME CRISIS



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ABSTRACT

Subprime Crisis has been the recent issues that the US and the Global economy are facing. There have been many downturns in the economy due to the crisis some leading to recession or stagnation of economy in some countries. In this paper you would find as to what the subprime is all about, the origination of the subprime, its impacts and the solutions to the crisis that we are facing today. Subprime lending is one Industry that the investment banks which was considered to be paying high returns due to the risk involved but when greed enters the scene, there is disaster for the economy called- subprime crisis.

Keywords: Subprime Crisis, Mortgage, interest rates, lenders, housing, Investment banks, stock market and economy.

Introduction

Subprime crisis is one of the current issues that the US and the Global economy are facing. Subprime is a financial term used to identify borrowers who don't qualify for a prime loan. A prime loan is a loan that charges the prime interest rate, also known as the 'prime rate'. Typically the prime rate is charged to financial institutions' best customers. Financial institutions identify prime and subprime with their credit score. If you have a credit score below 620, you are a subprime borrower. Credit score is a number that represents your ability to pay your financial obligations. To calculate credit score rating, agencies take a number of factors into consideration including payment history and credit availability versus credit used. When one is a subprime borrower, one can expect to pay a higher interest and higher fees for a loan. One would also be turned down if their credit score is low. There exists a relation between prime rate and subprime rate. A popular loan type which is the "adjustable rate mortgage" (ARM), also known as subprime mortgage. The interest rate 'floats' with the prime rate or London Interbank Offered Rate (LIBOR). By floating, it means the interest rate on the loan will change as the prime rate or LIBOR changes. Many ARMs are tied to the LIBOR so if the prime rate goes down the interest rate on the LIBOR pegged loan might not decrease. And so the people who are least able to pay are charged the most for the same loan amount to adjust for the increased risk" (Brownell, 2008).

"Borrowers approach mortgage brokers or conversely get brokers to cold call them. Brokers handle approximately 70% of the origination. Brokers match prospective borrowers with lenders who further lure borrowers with exotic mortgages such as "no doc" mortgages, which do not require any evidence of income or savings. Big banks and wholesale lenders such as HSBC Holdings buy the debt, repackage them and sell them to Wall Street firms. Wall Street banks and investment houses further repackage these loans in mortgage backed securities (MBS) and collateralized debt obligations (CDO). These structured products very often yield high rates of return and are sold to pension funds, hedge funds and institutions. Lenders very often use independent brokers who originate half of underwritings, of which 70% of them are subprime. The big mortgage houses grow so big that they outsource sales people to a network of thousands of other brokers that grow annual loans by huge proportions. Subprime mortgage brokers were actually protected by a legal leniency. Under US law, investors who buy securities backed by mortgages or even the actual mortgages will not be exposed to lawsuits for fraud. This protection partly explains how the US mortgaged backed securities market expanded at such a rapid pace. MBS's more than tripled since 2000. Last year was the first time that more than half of the asset backed securities issued were backed by subprime loans" (Nematnejad, 2007).

How did the subprime crisis begin?

It started with the economy being at risk after the dotcom bubble burst in early 2000 and the following September 11 attack in 2001.The response to the situation was that central banks around the world tried to stimulate the economy. They created capital liquidity through a reduction in interest rates. In turn, investors sought higher returns through riskier investments. Lenders took on greater risks too, and had ample capital to lend and, like investors, an increased willingness to undertake additional risk to increase their investment returns. In defense of the lenders, there was an increased demand for mortgages, and housing prices were increasing because interest rates had dropped substantially. At the time, lenders probably saw subprime mortgages as less of a risk than they really were: rates were low, the economy was healthy and people were making their payments. So they approved subprime mortgage loans to borrowers with poor credit. Consumer demand drove the housing bubble to all-time highs in the summer of 2005. Subprime mortgage originations grew from $173 billion in 2001 to a record level of $665 billion in 2005, which represented an increase of nearly 300% (Petroff, 2007).

Homebuyers took risk and bought houses that they could barely afford. They were able to make these purchases with non-traditional mortgages (such as 2/28(*a type of ARM that has a two-year fixed interest rate period after which the interest rate begins to float based on an index plus a margin*) and interest-only mortgages(*a type of ARM with an initial interest-only payment period. During this period no principal is paid but only interest paid)*), that offered low introductory rates and minimal initial costs such as "no down payment". Their hope laid in price appreciation, which would have allowed them to refinance at lower rates and take the equity out of the home for use in other spending. However, instead of continued appreciation, the housing bubble burst, and prices dropped rapidly. This resulted in the homeowners being unable to refinance their mortgage to lower rates, as there was no equity being created as housing prices fell. They were, therefore, forced to reset their mortgage at higher rates, which many could not afford. Many homeowners were simply forced to default on their mortgages. Foreclosures continued to increase through 2006 and 2007 (Petroff, 2007).

Lenders and homebuyers were not the only people at default but also the investment banks. The increased use of the secondary mortgage market by lenders added to the number of subprime loans lenders could originate. Instead of holding the originated mortgages on their books, lenders were able to simply sell off the mortgages in the secondary market and collect the originating fees. This freed up more capital for even more lending, which increased liquidity even more. A lot of the demand for these mortgages came from the creation of assets that pooled mortgages together into a security, such as a collateralized debt obligation (CDOs, *these are investment-grade securities backed by a pool of bonds, loans and other assets. These do not specialize in one type of debt but are often non mortgage loans or bonds*). In this process, investment banks would buy the mortgages from lenders and securitize these mortgages into bonds, which were sold to investors through CDOs (Petroff, 2007).

The behavior of investors also added fire to the situation. Investors were the ones willing to purchase these CDOs at ridiculously low premiums over Treasury bonds. These enticingly low rates are what ultimately led to such huge demand for subprime loans. Then finally, there was the hedge fund industry that added to this crisis. It not only pushed the rates low, but also increased the market volatility. There is a type of hedge fund strategy that can be best described as "credit arbitrage". It involves purchasing subprime bonds on credit and hedging these positions with credit default swaps. This amplified demand for CDOs; by using leverage, a fund could purchase a lot more CDOs and bonds than it could with existing capital alone, pushing subprime interest rates lower and further fueling the problem. Moreover, because leverage was involved, this set the stage for a spike in volatility, which is exactly what happened as soon as investors realized the true, lesser quality of subprime CDOs (Petroff, 2007).

As per Christopher Whalen, "There are three basic issues that seemed to be the root causes that led to the subprime crisis. First, the public policy partnership - The National Home ownership Strategy - spawned in Washington and comprising hundreds of companies, banks, associations and government agencies, to enhance the availability of "affordable housing" via the use of "creative financing techniques." Second, active encouragement by the SEC and federal bank regulators of the rapid growth of over-the-counter (OTC) derivatives and securities by all types of financial institutions, leading to a breakdown in safety and soundness at banks and securities dealers. And third, the related embrace by the Securities and Exchange Commission (SEC) and the Financial Accounting Standards Board (FASB) of "fair value accounting," an ill-advised change in reporting standards for all public companies that is arguably driving much of the current panic on Wall Street".

The explanation of how the **subprime crisis** began would now help us understand as to what happened in actual through the main events that led to the crisis, in the timeline provided to us by CNN Money. On February 7, 2007, HSBC announces larger than anticipated losses from rising defaults for subprime mortgages. On April 2, 2007, New Century Financial, one of the nation's largest subprime mortgage lenders filed for bankruptcy protection, cutting 3200 jobs and reducing workforce. June 2007, two hedge funds run by Bear sterns that had large holdings of subprime mortgages went into losses and were forced to dump assets with trouble spreading on to Merrill Lynch, JP Morgan and Goldman Sachs which had loaned the firm money. September 18th, 2007, the Federal Reserve started cutting the interest rates. March 16th 2008, JP Morgan takes over Bear Stearns, in a deal engineered by Federal Reserve, which agreed to provide up to $29 billion in financing to cover potential Bear Stearns losses. On July 11, 2008, the FDIC takes over Indy Mac (yet another leading lender who made home loans to people who do not provide proof of their income). On September 6, 2008, Treasury secretary, Henry Paulson takes over Fannie Mae and Freddie Mac that owned over $5trillion in mortgages. On September 15th 2008, Bank of America acquired Merrill Lynch in a deal joining one of the nation's largest banks with one of the its largest brokerage firms, for up to $50 billion. "There were two key events to impact the crisis. Two investment banks, categorized as non deposit-taking financial institutions (NDFIs), were in difficulty. It was the same day, the oldest and largest investment bank – The Lehman Brothers was filed for bankruptcy after the Federal Reserve Bank declined to participate in creating a financial support facility for Lehman Brothers. On the September 16th 2008, there was forced takeover of AIG by the government", (Roche, 2008).

The Impact of the Crisis

The impact of the crisis was not alone subject to the US but also impacted the global economy. The crisis had a huge impact on the economy as the stock markets, the household sector, the world food price, the credit industries, the oil industry and the foreign exchange markets were affected by the crisis. There has been increase in unemployment. Recently Citigroups had to cut more than 50,000 jobs due to the worsening of the economy (Ogura *et al*, 2008). "The crisis caused panic in financial markets and encouraged investors to take their money out of risky mortgage bonds and shaky equities and put it into commodities as "stores of value". Financial speculation in commodity futures following the collapse of the financial derivatives markets has contributed to the world food price crisis and oil price increases due to a "commodities super-cycle." Financial speculators seeking quick returns have removed trillions of dollars from equities and mortgage bonds, some of which has been invested into food and raw materials (Egypt news, 2008).

Beginning in mid-2008, all three major stock indices in the United States (the Dow Jones Industrial Average, NASDAQ, and the S&P 500) entered a bear market. On 15 September 2008, a slew of financial concerns caused the indices to drop by their sharpest amounts since the 2001 terrorist attacks. That day, the most noteworthy trigger was the declared bankruptcy of investment bank Lehman Brothers. Additionally, Merrill Lynch was joined with Bank of America in a forced merger worth $50

billion. Finally, concerns over insurer American International Group's ability to stay capitalized caused that stock to drop over 60% that day. Poor economic data on manufacturing contributed to the day's panic, but were eclipsed by the severe developments of the financial crisis. All of these events culminated into a stock sell off that was experienced worldwide. Overall, the Dow Jones Industrial plunged 504 points (4.4%) while the S&P 500 fell 59 points (4.7%). Asian and European markets rendered similarly sharp drops (*Egypt news*).

The much anticipated passage of the $700 billion bailout plan was struck down by the House of Representatives in a 228-205 vote on September 29. Stock markets plunged as it appeared that the measure would go down to defeat, and kept slumping into the afternoon when that appearance became a reality. By late afternoon the Dow industrials had fallen more than 5 percent and other indexes even more sharply. Oil prices fell steeply on fears of a global recession; investors bid up prices of Treasury securities and gold in a flight to safety. In the context of recent history, the result was catastrophic for stocks (Pear *et al*, 2008*).*The Dow Jones Industrial Average suffered a severe 777 point loss (7.0%), its worst point loss on record up to that date. The NASDAQ tumbled 9.1% and the S&P 500 fell 8.8%, both of which were the worst losses those indices experienced since the 1987 stock market crash"(Egypt news,2008).

The Global economy has been effected as countries like UK, Japan, Germany, Australia and countries in Asia like India and China(although not hardly hit as Europe and US) have had impacts on the various industries of their country. As per CNN news, China's economy growth rate has been projected to be 9.7 and India's to be 7.8 according to the IMF (International Monetary fund). "If China and India come through this crisis with very good growth rates that would be very important for the rise of global economy," Bob Buckle told reporters on the eve of a summit of the 21-nation Asia-Pacific Economic Cooperation". The International Monetary Fund has said emerging economies -- which include China and India -- will account for the world's entire projected 2.2 percent overall growth next year. It estimates rich nations' economies will together grow by just 0.1 percent this year while the developing world will grow by 5 percent. As per BBC News "There is a slowdown in the economy of UK as the confidence of the people in the market has gone down. The prices of housing has gone down, decline in the manufacturing sectors, rising prices of oil has all caused the UK to enter the verge of recession". "The capital flows in the Indian stock market under FII (Foreign Institutional Investors), depend on the easy liquidity in the American financial system. When the recent catastrophic events blocked the liquidity, we saw a corresponding sharp fall in the stock markets of the US, Asia and Europe. Also as the there have been the biggest Indian companies having obtained the market listing in the U.S stock exchange, making the stock market of India being more volatile. Further, the failure of the American financial giants means that the growth prospects of America will be affected. Many of our industries, especially in the service sector, depend on markets in the US and they will be adversely affected. The export, realty and aviation industries are badly hit by this crisis. The export of diamond industry fell significantly though this is a time of Diwali and Christmas" (Venkitaraman, 2008).

Solutions to the Crisis

The subprime solution is all about institutional reform: the vision to see beyond short-term fixes and the courage to undertake reform at the highest levels (Shiller, 2005). "As per Ohio congresswoman Marcy Kaptur in order to loan modification approach recommended that rescue funds for borrowers facing short-term problems caused by illness, layoffs or other one-time events be established, a bond fund to pay for switching borrowers out of unaffordable ARMs be established and refinance loans for victims of predatory lending. This would involve working with Fannie Mae, the quasi-governmental corporation" (Christie, 2007).

Changing loan terms, borrower and lender must accept to the terms, lenders may be unwilling to change terms but Fed interference will work out. But lender will accept to change in terms to avoid

foreclosures. Pumping money into markets, reducing bank reserves may temporarily weaken the crisis, but these this is twofold operation, pumping money will increase inflation which will results in increase in subprime lending, and reducing bank reserves to small extent is better but as whole destabilize the whole financial system. (Christie, 2007).

The key to the subprime solution, to preventing future crisis and its after effects by democratizing finance - extending the application of sound financial principles to a larger segment of the society, and using all the modern technology at our disposal to achieve that goal. Doing this will reduce the long-run incidence of speculative bubbles like the housing bubble that we have just experienced (Schiller, 2005).

Conclusion

Subprime crisis has been the word of the economic downturn and has got itself to be the item that tops the list of the APEC agenda too. It is estimated that rich nation's economies (USA, UK and Japan) will together grow by just 0.1 percent this year while the developing countries will grow by 5 percent. But the countries would be able to cope up with the crisis, given some time. It has surely given impacted the whole world not only in the financial sector but also the cost of living of common people as prices for goods have gone up. The Subprime crisis although disastrous can be avoided to a greater extent by better monitoring and regulation of fiscal, credit and monetary systems.

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APPLICATION OF VALUE STREAM MAPPING IN IMPROVING THE SERVICE PROCESSES OF A DENTAL CLINIC


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Abstract

The main purpose of this paper is to demonstrate how the time constraint can be successfully managed by eliminating, or at least reducing, the non value adding activities in a service process. For this purpose, the dental treatment section of a large dental clinic in a provincial city of Iran was selected. This research project focused on the use of the concepts of Lean Thinking by adapting them to suit a service type organization.

The results indicated that the Lean Thinking approaches can be also, successfully, applied to service type industries. Recommendations to reduce the identified non value adding activities were made to the management. Finally, suggestions for further research in this area were also made.

Keywords: waste, value stream mapping, lean manufacturing

Introduction

Regardless of the type (manufacturing or service) and size of organisations, meeting the customers' needs and gaining their satisfaction is significantly important for their success or even survival. Competitions from other organisations and availability of different options for the customers have certainly added another dimension to this need. It is extremely important to ensure that required product or service with the desired price and quality reaches the customers on time. Hence, businesses should be mindful of meeting the quality, price and time requirements at all times. An approach which has proven to be quite effective is Lean Production (Manufacturing).

It is noteworthy to mention that the concept of Lean Production (Manufacturing or more generally Thinking) was explored and presented in a book titled "The Machine that Changed the World" (Womack et al, 1990). This book which is based on five years of research presents a careful explanation of the logic and techniques of Lean Production (Manufacturing). The term lean highlights the role of reduction in costs as a means of achieving increased production. In other words, produce more by using fewer resources in terms of manpower, materials and time.

Pioneering and related work however, in the area of Lean Manufacturing was carried out at Ford Industries in the early part of the previous century (Abbett, 1999). The use of excessive amounts of materials and resources was regarded as waste by Ford. It is interesting to note the close

relationship between this concept and the Just in Time (JIT) philosophy which was developed back in the eighties in Japan.

The lean way of manufacturing is regarded as an approach or philosophy in which all concerned seeks to find ways of improving the processes. The main objective is to eliminate the non value adding activities from the processes. In order to achieve this objective, various methods may be adopted. One of these techniques includes the use of Value Stream Mapping (VSM). VSM was presented by Rother and Shook (1998) as a means of visualising the processes, the flow of materials and information. The main purpose of VSM techniques is to construct a pictorial representation of all activities which includes value adding and non value adding activities. Based on the observation by (Schultz et al, 2005) these tools and techniques create a suitable environment for achieving the ultimate objective of Lean Manufacturing. They assist with identification of the sources of value adding and non value adding activities by providing a comprehensive pictorial representation of the processes.

It should be noted that the majority of publications in this area have focused on goods producing rather than service providing industries. One of the main contributions of the research project, on which this paper is based, is a demonstration of how the concepts and techniques of VSM can be applied to a service type industry. For the purpose of the investigation, a dental clinic in a provincial city of Iran was selected. This paper demonstrates how the tools of Value Stream Mapping (VSM) can be adapted and applied to identify non value adding activities with a view to eliminate them from the processes.

Lean Manufacturing

One of the main characteristics of Lean Manufacturing is the idea of responding to customer demands. Therefore, each product is produced according to the customers' requirements and the demanded time (Kalsaas BT, 2002).

The ultimate objective is the elimination of waste. It is only logical to assume that elimination or even reduction of waste in processes can ultimately contribute to reductions in costs and time (Mehrban R, 2005). Generally speaking, Lean Manufacturing has three main objectives:

Achieve the highest levels of customer satisfaction.
Aim for complete elimination of waste.
Take into consideration the human factors in all processes.

According to Womack et al (1998), Lean Production (Manufacturing) includes: Description of value from the customer' viewpoint, determination of value stream, flow, pull and perfection.

They also note that waste includes all processes that use up resources and increase costs but do not generate any benefits for the customer. Seven categories of waste within a production unit have been identified which include; overproduction, unnecessary storage, scrap/faulty parts, unnecessary movement and transportation of materials and products, unnecessary processes, and delays.

Value Stream Mapping

Rother and Shook (1998) regard Value Stream as a collection of both value adding and non value adding activities in every stage of production. In other words, according to Tapping et al (2002) Value Stream covers stages from procuring raw materials and parts from the suppliers up to delivery of the product to the customer.

It should be mentioned that Value Stream Mapping (VMS) is, ideally, the very first step in evaluating the production processes (Rizzardo D. and Brooks R, 2003). As suggested by Shakeri Roshan (2005), Value Stream Mapping tools aim to map, analyse and document all the necessary processes and information flow in the production. This is achieved by accurately creating a graphical representation of all the necessary processes and information flow for the existing situation. In order to make improvements, a series of key questions relevant to the application are developed. In other words, by systematically and critically applying a questioning technique, improved methods and processes can be proposed. One can easily link these techniques with the traditional approaches of Methods Study which were widely used earlier in the previous century. As a result, non value adding activities can be identified and then eliminated. Again one can draw parallels with the Just in Time (JIT) philosophy which targets the elimination of whatever is regarded as waste.

Like JIT, Lean Thinking is also based on the pull rather push philosophy. Hence, instead of producing for *just in case*, one aims for *just in time*. Being mindful of this philosophy, one can chart and map all the processes from downstream (customers) all the way up to upstream (raw materials). The output will then reveal the productive times associated with value adding activities as well as the wasted times caused by the non value adding processes.

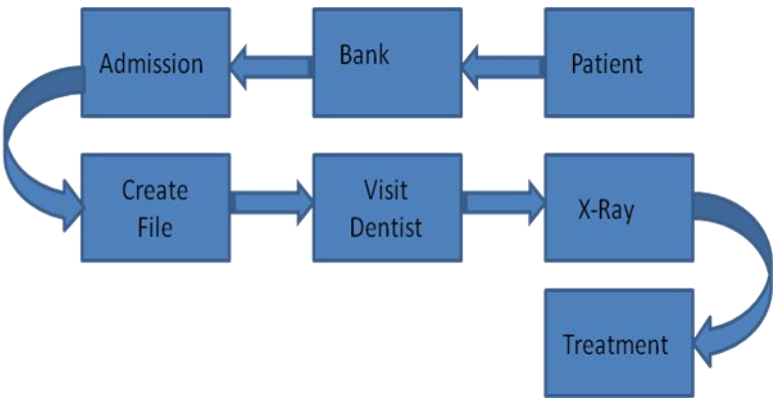
In summary, Value Stream Mapping consists of mapping and charting an existing situation in a given process and critically analysing it so that appropriate improvements can be suggested and implemented (Salzman RA, 2002). The next section presents a case study based on a real application in a typical service sector. Hence, it is demonstrated how the concepts of VMS can be adopted and then adapted to suit a non manufacturing application.

The Methodology Applied in Applying Value Stream Mapping

In order to test the applicability of VMS to service type industries, a dental clinic in a provincial city of Iran was selected. This particular clinic is known as having reasonable fees and above standard treatment quality. On average per day, around 90 clients visit the clinic. 36 patients (39.5%) of the patients are referred to the dental treatment department. A number of these patients require multiple treatments. Hence, the average demand for the Dental Treatment department is around 50 patients per day.

It should be noted that the chosen processes in this case relate to the dental treatment and the patients constitute both customers and the materials. The patients and their flow through the system are also very closely associated with information and its flow. Figure 1 is a diagrammatical representation of the processes under investigation.

Figure 1 – Activities Included in the Dental Treatment process



It was agreed that the most effective way of mapping the current situation was to, physically, be present at the clinic and conduct the data collection by observation. In order to ensure that the collected data for our sample did not exhibit any biases, a complete week was chosen as the period of observation. The methodology adopted for this study consists of: 1- General observation; 2- Calculation of the number of patients; 3- Data (types, durations and sequences of various activities) collection; 4- Value Stream identification and mapping the current situation; and 5- Value Stream analysis of the current situation; and 6- Developing and mapping the Value Stream for the future (improved) situation. Before proceeding any further, it would be appropriate to elaborate on the key phases above.

The method of observation and data collection was thoroughly explained to the staff of the clinic prior to the study. The general observation and data collection were carried out by three observers who were present at the clinic for a period of one week during the working hours. The team members were equipped with digital stopwatches similar to those used in Motion and Time Study. After their allocation, the observers conducted the study according to a pre determined schedule. To keep a record of the number of patients entering the system, a spreadsheet was used.

Table 1 presents a summary of the key information related to Phase 3 for various sections of the chosen department.

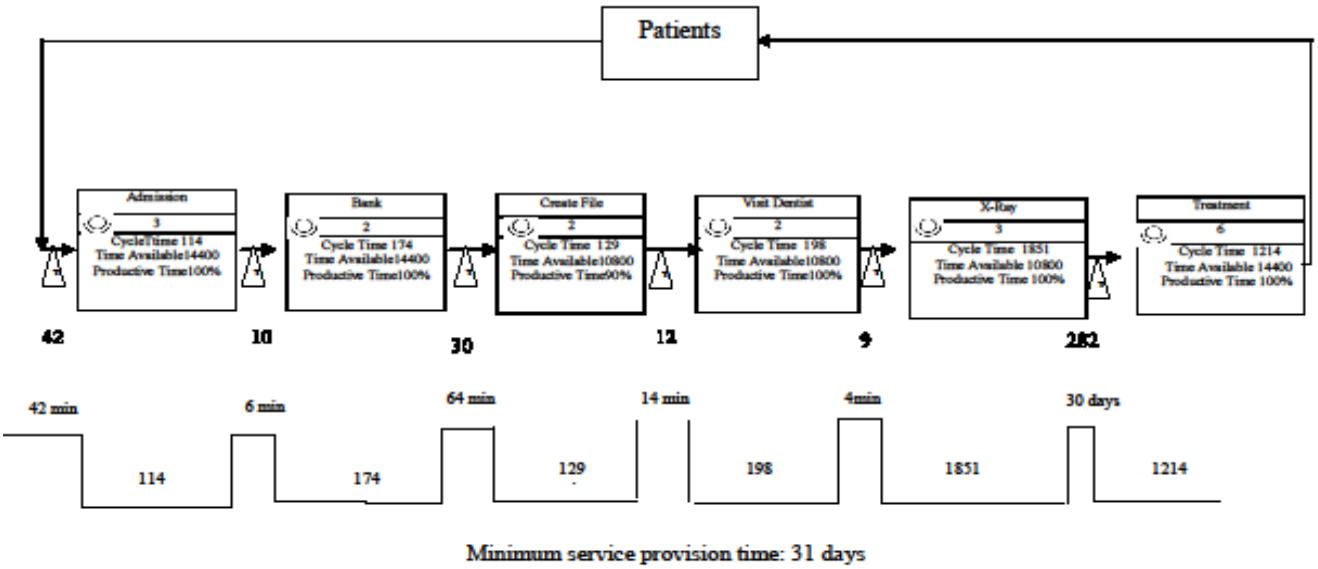
Table 1.

Table1 – Times Associated with the Activities of the Existing Situation

Stage	Total Time per Patient (Sec)	Productive Time (%)	Queue Length	Number of Staff
Admission	114	100	42	2
Bank	174	100	10	2
Create File	129	90	30	2
Visit Dentist	198	100	12	2
X-Ray	1851	100	9	3
Treatment	1214	100	282	6

This tabular representation can also be illustrated graphically using an approach and symbols similar to those adopted in a typical Method Study or Organization and Methods (O&M) exercises. For instance, the above sequence of the stages (1 to 6) can be depicted along a time axis as shown in Figure 2.

Figure 2 – The Graphical Representation of the Existing Situation for a Day shift



The number below the Stage title inside the box represents the number of staff at that Stage. The number at the bottom between each box (Stage) shows the average queue length (Work in Progress). The top number along the staggered timeline below the Figure represents the average waiting time before entering the Stage. And finally, the lower number along the timeline is average cycle time for the activity. Please note that the cycle time (average) is also shown inside each activity box.

As a first step in analyzing the activities, it was necessary to determine the nature of the activities in terms of being value adding or non value adding. It should be noted that non value adding activities, in some cases, are unavoidable. Therefore, the study focused on identification of the avoidable non value adding activities with a view to either their elimination or replacement.

The following Tables (2 to 6) tabulate the problems and waste type identified in each stage of the activities presented in Table 1.

Tables 2 to 6.

Table 2 – The 'Admission' Phase

Identified Problems	Waste Type
Entering the System at the Opening Hour by the Majority of the Patients	Unnecessary Storage (Waiting/Queuing) times Due to a Very Large Demand
Large Number of General Enquiries with regard to	Delays

Various Issues	
Lack of Information Signs to Assist Visitors in Finding their Way to the Right Place	Unnecessary Movements by Patients

Table 3– The 'Create File' Phase

Identified Problems	Waste Type
Early and Premature Arrivals at the Desk	Unnecessary Storage (Waiting/Queuing) times
Lack of sufficient Information Signs	Unnecessary Movements by Patients

Table 4 – The Visit Dentist' Phase

Identified Problems	Waste Type
Recommendations for Additional or Unwanted Treatment from the Patients' Viewpoint	Overproduction (Unnecessary Activities) in the Case of Patients' Acceptance of the Recommendations
Early and Premature Arrivals in the Room	Unnecessary Storage (Waiting/Queuing) times
Incorrect Diagnosis	Unnecessary processes

Table 5 – The 'X-ray' Phase

Identified Problems	Waste Type
Unnecessarily High Quality of the Materials and products	Overproduction (Unnecessary Activities)
Long Waiting Times Considering the Overstaffing Situation	Delays

Table 6 – The 'Treatment' Phase

Identified Problems	Waste Type
Relatively Long Durations	Delays
Unsatisfactory Outcome in Some Cases	Faulty/Scrap parts

The findings provided in the above Tables (2 to 6), were then used to deal with the identified causes of non value adding activities with a view to their elimination from the processes. It was necessary to calculate the average available time per patient for each phase. This calculation was carried out as follows:

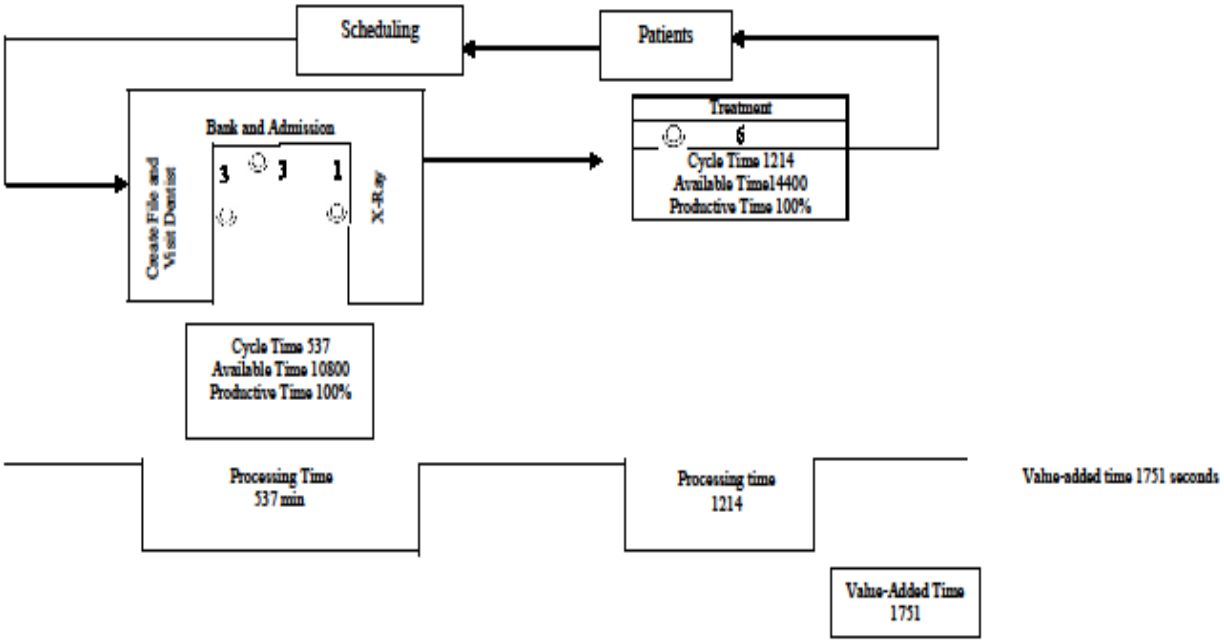
Average Available Time per Patient (AATP) =

Total Daily Available Time / Average Daily Demand

According to the findings of the existing situation, both visits to the dentists (phases 4 and 6), have fluctuating times for different patients. These fluctuations are the deviations from Average Available Time per Patient. For instance, the deviations from the AATP for these phases are 120 and 288 seconds per patient respectively. There are also waiting lines in these phases. These queues are predominantly caused by uneven distribution of the patient arrivals at the dentists' rooms. These queues can be eliminated or at least minimised by a more even distribution of the patients throughout the day. As a result, a continuous flow with relatively smaller fluctuations can be created. Improvements in the facilities and equipment can also contribute to achieving this goal. For instance, the X-Ray section can benefit from updating their equipment and methods of processing films. Considering the daily demand of 50 cases and an average treatment time of 1214 seconds per patient, an average of 16 hours, 52 minutes and 40 seconds would be required. By dividing this figure by the number of dentists available per day, two hours, 48 minutes and 37 seconds of productive work by each dentist would be a requirement.

Figure 3 illustrates a graphical representation of the improved situation. As it is shown, the total time has been considerably reduced. This reduction in total time is achieved by improving incorporating a new activity titled Scheduling which can allocate patients to various stages at more appropriate times. The layout of the facilities should also be improved by combining activities such as Admission and Bank services. Such a combination would contribute to a smoother flow of materials, information and products (service).

Figure 3 – The Graphical Representation of the Improved (Value Added) Situation for a Day Shift



Conclusions, Recommendations and Suggestions for Further Research

The findings have revealed that the investigated clinic is certainly not a lean organization. This is partly caused by a gradual increase in the demand over the years but with practically no changes or improvements in the processes. It was demonstrated that Value Stream Mapping could be a suitable tool in identifying the nature and exact location of the waste.

In particular, the 'dentists' visits' and 'treatment' phases would certainly benefit from avoiding unnecessary and unwanted procedures. Hence, an attempt to create an even flow of patients rather than fluctuating arrivals can be achieved. The dentists could also ensure that they would receive the necessary information with regard to an anticipated demand so that they could be present and ready. The X-Ray section should investigate the possibilities of changing to automated film processing from the current manual methods.

As it was discovered in the current situation's analysis, a lack of communicating the necessary information and instructions by appropriate displays around the clinic also plays a role in generating waste.

It is also recommended that a further comparative study of a number of similar organizations to be carried out to identify the nature and effect of factors contributing to non value adding activities. Such an investigation would rank the strength of contributory factors which are commonly identified.

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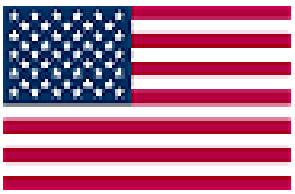
PERSPECTIVES ON GENDER EQUITY AND EMPOWERMENT: A LOOK AT ENTREPRENEURSHIP



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Abstract

Following the West is in vogue in today's society. Isolating their culture and economic aspects, gender empowerment is yet an unseen formula when compared with the Eastern geographic. The concept of "Gender Equity and Empowerment", arising from the grass root levels in remote villages by establishing nuclear Self Help Groups(SHGs) and liberating themselves as financially independent and successful entrepreneurs has set remarkable trademarks in today's world of business and rural entrepreneurship. Scaling the probabilities of empowerment in western horizons, we find a significantly low momentum in the western women. In comparison with other countries, we find women in the west preferring to indulge in odd and routine jobs instead of taking a risk to emerge as fresh entrepreneurs. Bringing a change in such an outlook and perspective, by exposing them to risk management will certainly bring out a new revolution globally in the field of entrepreneurship

Introduction

Research has shown that the percentage of female entrepreneurs in Europe and America still remains low in relation to that of male entrepreneurs and to the percentage of women in the population. The creative and entrepreneurial potential of women is a latent source of economic growth and new jobs and should be encouraged.

Women face a number of difficulties in establishing and maintaining businesses. Although most of these difficulties are common to both genders, in many cases they tend to be more significant for female entrepreneurs. This is due to factors such as a poor business environment, the choice of business types and sectors, information gaps, lack of contacts and access to networking, gender discrimination and stereotypes, weak and inflexible supply of childcare facilities, difficulties in reconciling business and family obligations, as well as differences in the way women and men approach entrepreneurship.

When starting a business, women often face different barriers and circumstances than men. They may have to struggle with specific problems and do not participate in support programmes to the same extent that men do. This is despite the fact that women are well educated and have innovative business ideas which will create new jobs and contribute to the challenge of structural changes in Europe.

From many important aspects, four key issues in the promotion of women entrepreneurship are dealt with through the creation of four sub-networks:

1. **Problem awareness** - Lack of role models, difficulties in balancing family and work or economic problems in traditional sectors are reasons why women don't start their own business. Those who take the chance often have to face new problems in the form of missing networks, male dominated support systems or even real discrimination. Long-term solutions have to start in the educational system and role models who draw a realistic picture of female entrepreneurship can encourage women to take the chance of being self-employed.

2. **Support instruments -** Successful support programmes have to pursue the long-term goal of equal opportunities for women and man and to promote a culture of women entrepreneurship. Purposeful public relations, projects in school and resource centers for women entrepreneurs can contribute to achieve this goal. But women still need individual help when translating their plans into action, financing their projects or accessing networks. Examples like the Swedish "Starting Line" or micro-financing programmes existing in England or Spain can act as good practice just as the "Women Entrepreneurs Meetings".

3. **Regional networks -** While men have always used their "old boy's network" to initiate business, to generate business contacts and to collect information, women often have scruples about using net-works for the benefit of their enterprises. Successful networks need clearly defined objectives, target groups and organizational structures. Visions, strategies and openness for changes are crucial elements of thriving networks. Good examples in this context are the English networks "WIN" and "Prowess" as well as virtual "Women entrepreneurs' portals".

4. **Education and training -** It is generally agreed that entrepreneurial education should be a long-term objective and has to start as early as possible in the education process. School firms and business games support entrepreneurial thinking and acting, promote personality development and help to reduce gender related problems. When preparing for the actual start-up women require specific training. Training activities should be based on an interdisciplinary approach and involve successful women entrepreneurs. In this context imparting theoretical knowledge and sharing hands-on experience is equally important.

❖ **Drawbacks for Women's Small Business and Entrepreneurship in Bush Administration in US:**

Small Business and Entrepreneurship expressed extreme disappointment at the Bush Administration's failure to help women-owned firms gain equal access to federal contracts under a law enacted seven years ago. In a letter to the Administration, Small Business and Entrepreneurship Committee Chairman **John Kerry** wrote:

"By putting up more roadblocks for women entrepreneurs trying to enter the federal marketplace the Bush Administration is making a serious mistake," said Senator Kerry. "Women own almost 30 percent of small businesses in our country, yet they receive only 3.4 percent of federal contracts. When Congress passed the law seven years ago, we intended to level the playing field for the 10 million women entrepreneurs in our country, but this insulting, misdirected and narrow interpretation of the law does nothing to make it easier for women to compete." "The SBA's decision to exclude most industries from the program fails hundreds of thousands of woman-owned businesses that are ready and able to fulfill federal contracts," Senator Levin said. "The rule is inconsistent with Congressional legislative intent, and I'm hopeful that the SBA will amend the program so that these businesses are given the opportunity to compete."

➢ **Support by other Senators on the issue:**

1. "Women-owned small businesses deserve the same support as all small business owners," said **Cantwell.** "Since taking office, I have worked hard to make sure small business owners, regardless of gender, are able to compete in a free and fair market. Road blocks like these imposed by the administration is a step in the wrong direction. Small businesses are the backbone of our communities and contribute greatly to our economy. During a time of economic instability, proposing this rule puts the market at great risk."

2. "The newly proposed rule is a step backwards and denies women-owned businesses the equal opportunities that the SBA is supposed to be promoting," said **Senator Cardin**. "I join

with Chairman Kerry and my colleagues to urge the SBA administrator to re-write the rule to ensure women are not excluded from the resources they deserve."

3. "Like most rural states, small businesses are the backbone of Montana's economy," **Tester** said. "And when it comes to federal contracts, the playing field needs to be even for all men and women who run small businesses. We'll make sure the SBA gets that message, loud and clear."

The Women's Procurement Program of US: An overview from their website

The Women's Procurement Program, enacted into law in 2000, creates a set-aside program to help women fairly compete for federal contracts. Women receive only 3.4 percent of federal contract dollars - far short of the five percent goal. Yet a recent rule proposed by the Small Business Administration (SBA) claims that women are underrepresented in only four out of more than 140 categories of federal contracts. Despite repeated bipartisan calls for action, the Bush Administration has failed to implement this program over the last seven years, costing women-owned businesses an estimated $6 billion in lost potential revenue.

Initiatives for Promoting Women Entrepreneurship in the West (Europe and United States)

The National Women's Business Council is a bi-partisan federal advisory council created to serve as an independent source of advice and policy recommendations to the President, Congress, and the U.S. Small Business Administration on economic issues of importance to women business owners. The Council's mission is to promote bold initiatives, policies and programs designed to support women's business enterprises at all stages of development in the public and private sector marketplaces -- from start-up to success to significance.

The Foundation for Women Entrepreneurs (Malta) has been set up for the promotion of opportunities, awareness building, training and research in the field of Women Entrepreneurs and other gender issues in Malta, Europe and the Mediterranean.

United States Association for Small Business and Entrepreneurship (USASBE)

The International Council for Small Business (ICSB) was founded in 1957 in the United States as a comprehensive organization of outstanding researchers, scholars, teachers, administrators, and public policy makers interested in entrepreneurship and small business. As the organization grew, members decided to form national affiliates, and the U. S. Affiliate of the ICSB was established in 1981. In 1985, the name was changed to the United States Association for Small Business and Entrepreneurship (**USASBE**).

USASBE is an eclectic group of government officials, directors of small business development centers, and academics in fields like finance, marketing, management, and economics united by their common interest in entrepreneurship and small business.

As leaders in their fields, they are making an impact on government policy and on the development of small business and entrepreneurship. USASBE's forward-looking members are determined to remain on the cutting edge of research; they are extending the field of knowledge and shaping entrepreneurial thinking for the 21st Century.

Minority and Women Entrepreneurship - Minority and Women is a special interest group organized under the auspices of the Articles of Incorporation of the United States Association for Small Business and Entrepreneurship (USASBE) to promote and encourage the development and advancement of

programs and services in the specific entrepreneurship field and to provide a forum for information exchange.

- **International Networks Promoting women's entrepreneurship**

PROWESS ("Promoting Women's Enterprise Support Services"), United Kingdom

ProWomEn - Promotion of Women Entrepreneurship, Europe

WENETT-Women Innovators for Europe - Germany, UK (Scotland), Sweden, Poland, Bulgaria

Women Into the Network (WIN), United Kingdom

Yente (Yente is the programme for development cooperation of the Federatie Zakenvrouwen, Netherlands) Netherlands

- **Projects Promoting women entrepreneurs and female entrepreneurship**

Bundesweite gründerinnenagentur – bga (National agency for women start-ups) Germany

Euroimpresa Legnano, Italy

Gründerinnenzentrum Steiermark (Female Founders´ Center, Styria), Austria

INITIATIVE FRAUEN GRÜNDEN (INITIATIVE FEMALE FOUNDERS) **Austria**

La plate-forme entreprendre au féminin (Women entrepreneurs' platform), France

WE-Mentor (Steinbeis-Europa-Zentrum)Project partners from: Germany, Belgium, Italy, UK, Romania, Turkey, Israel and India

Women in Business and in decision-making in Europe and America

It's a surprise that developing countries in **Eastern Europe** have low rates of women's entrepreneurship, closely resembling their highly developed European neighbors, while countries in **Latin America** and the **Caribbean** have rates of women's entrepreneurship two and three times higher, said the study's principal researcher, Babson Professor **Elaine Allen**, in an interview. Regardless of gender or country group, employment matters to entrepreneurial activity. The likelihood of being involved in entrepreneurial activity is three to four times higher for women who are employed in a wage job compared to women who are not working, are retired, or are students.

Conclusion

In conclusion we find globally, the rate of male opportunities in entrepreneurship exceeds that of women, but there's no gender gap with respect to necessity entrepreneurs, who start a trade for survival. We may define a "necessity entrepreneur" as someone who embarks on entrepreneurship because they are not able to find sufficient income elsewhere.

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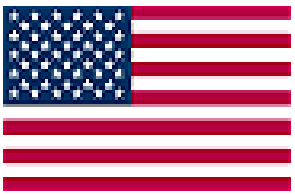
AUTOMATED HIGHWAY SYSTEMS



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Abstract:

As the effective mobility is one of the prerequisites of the developing society, the main objective of this paper is to configure the highway transportation system to a convenient mode in exploring and reducing environmental impact of transportation and decreasing air pollution, potential to substantially improve the safety and efficiency of highway travel, consumption of fuel and emissions, due to its unique idea of smoother traffic flow. It even reduces the congestion of traffic and increase the convenience of highway users. Spot accident detection will be an outstanding feature with its speed regulation factor and it provides, with its distinct features of communication, an effective regulation of traffic with this type of highway transportation i.e. Automated highway systems.

This highway system consists of a platoon system which monitors the vehicles to change its functions to an automated driving from manual driving for further operations such as lane changing, lane keeping, longitudinal space and speed regulation. This platoon concept gives a highly precision steering with improving highway efficiency, safety and good environmental conditions which targets an optimum mark in highway transportation in this global arena

Introduction

What is i.t.s: intelligent transport system has received a lot of attention in the transportation community during last decade due to its distinguished features. The term intelligent transportation means different things to different communities. It is the application of advanced technologies such as computing, sensors, radars etc. It is supposed to focus on different problems associated with our existing transportation.

I.t.s is mainly concentrated on two main goals that are to be implemented accurately.

1. To increase the capacity of the present transportation system by completely utilizing various advanced technologies.
2. To ensure maximum safety to the users.

Also some more additional benefits are expected from i.t.s.

1. Reducing environmental impacts of transportation.
2. Long term cost savings given the increasing cost of building new facilities, such as roads and bridges, and physically expanding the old ones.

I.t.s includes many elements which have various purposes to serve for the transportation world. The following are the major elements of i.t.s.

1. Advanced traffic management systems (a.t.m.s). It monitors the traffic flow and provides decision support to the users to reduce congestion on highways.
2. Advanced traveler information systems (a.t.i.s), which provides travelers with directions, route assistance and real-time information on route conditions.
3. Intelligent vehicle initiative (i.v.i), which focuses efforts on developing vehicles with automated components.
4. Advanced commercial vehicle systems (a.v.c.s). It provides support for commercial vehicle operations and logistics.

The final and crucial element of i.t.s about which this paper is being discussed is automated highway systems (a.h.s), which supports and replaces human functions in the driving process.

Automated highway system (a.h.s.)

The concept of automated highway system was first proposed late back in 1939 world's faith by general motors (gm).this concept defines a new relation between vehicles and highway infrastructure. Automated highway system refers to a set of designated lanes on a limited access roadway where specially equipped vehicles are operated under completely automatic control. Ahs uses vehicle and highway control technologies that shifts driving functions from the driver to the vehicle. Throttle, steering and breaking to provide safer and convenient travel. The vehicles and highway cooperate to coordinate vehicle movement avoid obstacles and improve traffic flow improving safety and reducing congestion of vehicles.

A major long term element of intelligent transportation systems research and development is automated highway systems. The automated highway systems program is a broad international effort "to provide the basis for, and transition to, the next major performance upgrade of the vehicle/highway system through the use of automated vehicle control technology.

The term "fully automated intelligent vehicle highway system" is interpreted to mean a system that:

- Evolves from today's roads
- Provides fully automated "hands-off" operation at better levels of performance than today's roadways in terms safety, efficiency, and operator comfort ; and,
- Allows equipped vehicles to operate in both urban and rural areas on highways that are both instrumented, and not instrumented.
- Ability to achieve long distance travel using guide way-derived power generated from non-petroleum energy sources.
- Significantly improved safety characteristics, especially those resulting from driver error or impairment.
- General elimination of congestion in on-guide way operation and improved trip time predictability.
- Significant reduction in right-of-way requirements for new highways.

Automated highway systems have the potential to improve the safety and efficiency of highway travel. In addition there are several potential benefits for the environment. Vehicle fuel consumptions and emissions will be reduced due to its smoother traffic flow and less congestion, resulting in shorter trip times. Further, if vehicles operate at very close spacing (platooning), the aerodynamic drag on the vehicles will be lower and fuel consumption and emissions will further be reduced.

Need for automated highway systems

Element	Benefits
Roadway capacity	More vehicles can be accommodated on highways. The number of vehicles per hour per lane can be significantly increased as traffic speeds are standardized and increased and headway distances are decreased. It is expected that two or three times more vehicles could accommodated through elimination of inefficiencies caused by inattentiveness, merging, weaving, and lane changing.
Safety	Driving safety will be significantly greater than at present. The human error factor will be removed. Some estimates state that overall 70% improvisation can be realized with the automated highway system application.

Weather	Weather and environmental conditions will impact on high performance driving. Fog, haze, blowing dirt, low sun angle, rain snow, and other conditions affecting the driver visibility and thus, safety and traffic flow will be no longer impede progress.
Mobility	All drivers using the automated highway system can be safe, efficient drivers. Automated highway system offers enhanced mobility for people with disabilities, the elderly, and less experienced drivers.
Energy consumption and air quality	Fuel consumptions and emissions can be reduced. In the short term, these reductions will be accomplished because started and stop driving will be minimized and because on-board sensors will be monitored to ensure that the vehicle is operating at top performance. In the long term, automated highway system can support future vehicle propulsion / fuel designs.
Land use	Land can be used more efficiently. Roads will not need to take up much room, since automated highway system facilities should allow for more effective use of the right way.
Commercial and transit efficiency and economic gains	More efficient commercial and transit operations. Commercial trucking can realize a better trip reliability to support "just-in-time" delivery. And, transit operations can be automated, extending the flexibility and the convenience of the transit option to increase driving and service.
Travel time savings	Automated highway system can restore free flow travel conditions from congested speeds in urban highway travel, thereby reducing the travel times. In addition, for long distance intercity travel, it permitted higher cruising speed than today's driving. Therefore, time that automated highway system frees up could be utilized for other purposes.

Design of A.H.S.

The consensus in the automated highway system community is that ahs will evolve over a series of smaller steps in technology. The final step of full automation will not be a leap, but a logical consequence of previous development and deployment efforts. Each step in the technology will be "synchronous".

It is frequently assumed that an automated highway system will require lanes exclusively dedicated to automated operation, and that operation in mixed traffic is either not safe or not practical. Since these assumptions preclude automated vehicles existing lanes with manual traffic, they imply the design of an ahs will require either new construction or diversion of existing lanes from their current use, and at a time when there are likely to be few vehicles equipped to use them. If these assumptions are indeed valid constraints, they make the initial deployment step very steep one. First there would be the need to justify investment in infrastructure well before there are compensating benefits. At least as serious is the prospect of the heat that will be generated by drivers who must continue to endue the unrelieved or possibly worsened. Congestion of vehicles in full view of this underutilized road space.

An automated highway system is much more likely to be brought into being if the operational concept at the system that supports it are compatible with a gradual and non-disruptive introduction into the existing freeway system operational environment. Here, we describe and broadly analyze an evolutionary scenario in which the vehicles equipped for automated operation are assumed to be capable of safely operating in mixed traffic with unequipped manually operated vehicles. We assume the gradual evolution of incremental change both in the scope and capability of the automated features and in the vehicle fleet, as new equipped vehicles replace old ones. The scenario described is both technically and operationally feasible, and offers the prospect of an essentially seamless and non-disruptive path to an automated highway system.

The design includes:

- Regulation layer, which controls the low- level physical aspects and tracking of the vehicle;
- Coordination layer, where vehicles interact with each other to perform distributed cooperative decision making on automated highway system operations.
- Link layer, which locally optimizes traffic flow, and the
- Network layer, in which the vehicles interact with the infrastructure computers to obtain routing and permission information.

Regulation layer*:*

This layer is the most fundamental for vehicle control. It controls the vehicle's steering, speed and braking. This is accomplished by using a physical model of the vehicle's dynamics, sensor inputs from neighboring vehicles and directional information from the coordination layer.

Vehicle control:

Vehicle control is probably the most important part of advanced a.h.s. applications. Implementation of ahs necessitates automatically controlled vehicles. Achieving the optimal solution to congestion and safety problems requires extensive research in system modeling, lateral controls and longitudinal controls. In fully automated highway systems, these control systems will rely on vehicle to vehicle communication as information on the velocity and acceleration of other vehicles will be utilized in individual vehicle control. The same information and much more may also be received via vehicle to roadside communications.

Longitudinal control:

This is the important aspect of the future a.h.s. One of the major concepts in this area is *platooning*, which is a formation of traveling vehicles that maintain close spacing at highway speeds. The concept requires inter vehicle communication links to provide velocity and acceleration information from the lead vehicle to each of the following vehicles, as well as the velocity and acceleration of the preceding vehicle in the platoon. Inter-vehicle communications increase the stability of the platoon formation in the case of identical vehicle platoons.

Fig. 1. The above picture shows platoon system 8 vehicles

In the case of a platoon of non-identical vehicles, the situation will be complex. The control system of such platoons combines three nested loops for speed regulation, spacing control and speed synchronization. Also there are some limitations in this type of platoon systems.
These limitations conclude that

- Platoon system must be limited and comprised to approximately fifteen vehicles.
- Nonlinearities significantly affect the response characteristic of the platoon.
- Emergency situations need further investigation before proper sensor specifications can be included for an effective operation of automated highway system.

Longitudinal control ensures that the vehicle follows the vehicle ahead of it and maintains an appropriate trailing distance. This facility provides sufficient time for the vehicle to stop without crashing and controls speed changes so the occupants do not feel jerky, or abrupt, movements during normal operation. It also considers the actions of the vehicle within the context of the following many other vehicles. The design of longitudinal control sub-layer includes control design for heavy duty vehicles, adaptive control of a nonlinear platoon model, automatic braking systems and their effects on capacity, advanced control techniques and adaptive traction control.

Lateral control:
It is concerned with changing lanes, steering and following curves in the roadway. As it is based on human reasoning which includes fuzzy rule-based controller for lateral guidance of a vehicle, this system admits to the flexibility in the choices of inputs/outputs, and on-line/offline training capability.

There are a few experimental accomplishments which include use of magnetic markers and the use of visual information for lateral position handling of the vehicle. Initially it employs magnetic markers imbedded into the road to detect the lateral displacement from the centre of the lane. Vehicles equipped with magnetic sensors on their front bumpers are reported to be successful.

The second application for lateral control includes the use of visual data and on-board computing resources to obtain the steering command. In order to locate the road ahead the “rapidly adapting lateral position handler” uses a template-based matching technique to find parallel image features such as lane markings or tire and oil markings.

A third type of lateral control consists of a vision-based system with a neural networks learning from a driver.

Combined lateral and longitudinal control:
Although much of the research to date has focused primarily on either lateral or longitudinal control, an overall automated driving system combining both lateral and longitudinal control is vital for future automated highway systems.

Hierarchical control structure:
This control enhances the driving or operating of an automated vehicle, an automated vehicle has to check up with the following observations:

- It has to choose its route to reduce the travel time
- Plan its path to ensure a smoother traffic flow
- Maneuver in coordination with other vehicles, and
- Regulate the proper spacing and steering to increase the traffic flow in a safe manner.

An automated highway that leaves the driver in control of the vehicle can only achieve a capacity of 15% above the maximum value of 40vehicle/lane/min2. The behavior is the capacity 'bottleneck' in such a system. Furthermore 90% of highway accidents are results of incorrect driving or the wrong decisions made by the driver. Therefore, an automated system might increase both the capacity and safe.

This structure includes a platoon concept – a platoon having a size of 15 with intra platoon spacing of 2m, inter platoon spacing of 60m, and a steady speed of 72km/h will increase the capacity to 105vehicle/lane/min, which is much larger then maximum empirically observed values done by the path project. Decreasing the distance between the vehicles to 0.020m will change this number to 130vehicle/lane/min, although it may not be feasible for a homogeneous platoon of vehicles. For intra platoon distances, it is difficult for a driver who has a reaction delay of 0.25-1.20sec in order to secure an adequate safety.

The tasks can be achieved by constructing four layer hierarchical control architecture:

- Network: it assigns a route to each vehicle as it enters the automated highway system
- Link: it assigns each vehicle a path which balances traffic for all lanes, and assigns a target speed for each section highway an also it is helpful in assigning a platoon size.
- Planning: it creates a plan which approximates the desired path.
- Regulation: it controls the vehicle trajectory so that it confirms the plan

A separate physical layer is assumed to be below the regulation layer that provides the sensor data and responds to actuator signals.

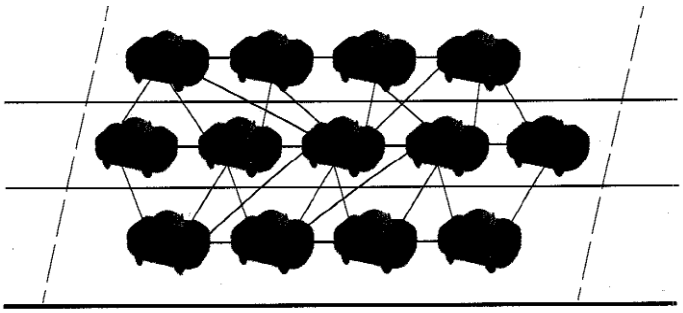

Fig. 2. A platoon system with more vehicles showing ways of communication with surrounding vehicles

Coordination layer:
The coordination layer forms the heart of the distributed cooperation between the vehicles in automated highway system. Vehicles cooperate with each other by direct nearest neighbor communication. It communicates with the nearest vehicle in the lane or the different lane but in the same platoon by using the sensor setup so as to proceed with the further operations in the automated system.

This coordination layer uses software and algorithms to allow for lane changes of the perspective vehicles, entry or exit maneuvers. Since each vehicle runs a copy of t he same software, the programs are written generally to accept and send messages on communication ports that corresponds to ports on neighboring vehicles. Thus the individual vehicles cooperate with each other to maximize the highway transportation throughout while allowing each vehicle to reach its specific destination.

To accomplish a lane change (to satisfy a routing requirement or prepare for an exit maneuver), a vehicle communicates with its neighbors to split the platoon into two as this phenomenon is termed as split operation. Once the platoon is split, the vehicles evolved in the two newly formed platoons must coordinate with each other so that only single vehicle moves into the open lane, as this operation merges another platoon, this phenomenon is termed as merge-split maneuver.

The other maneuver operations of the coordination layer are Entry maneuver and Exit maneuver. Entry is a special platoon merge maneuver where the vehicle of an automated highway system accelerates to merge with an existing platoon system in the automated highway system.

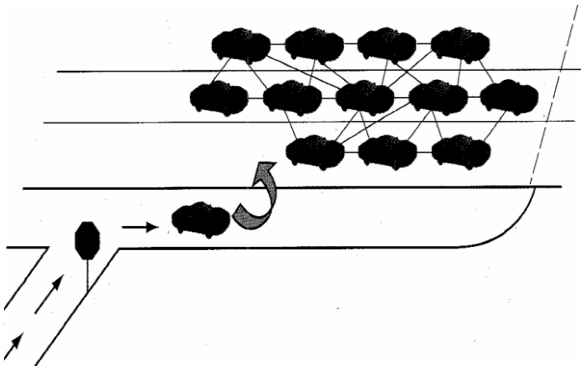

Fig. 3. the above figure shows the entry of a vehicle into a.h.s.

Exit maneuver controls the exit of the entered automated vehicle. When a vehicle wishes to leave the automated highway system, it engages in a special split maneuver and acquires a safe permission by using the algorithms developed and thereby it leaves the platoon system.

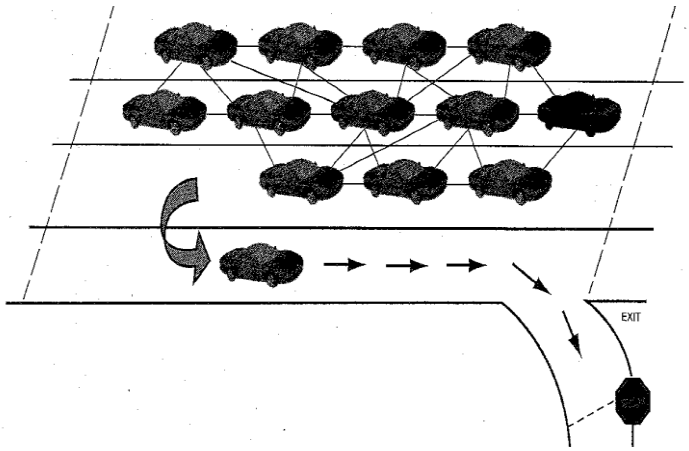

Fig. 4. this figure shows the exit of a vehicle from automated conditions

Link and network layer:
In the link layer, messages are passed between the network and coordination layers to manage and locally optimize traffic flow and balance lane usage. Computer scientists typically design the message passing using distributed operating system techniques. Civil (traffic) engineers specify the algorithms according to traffic flow theory.

In the network layer, routes and entry/exit permissions are assigned by the infrastructures. The routing algorithms come from operation research and are shortest travel time routing algorithms on per-vehicle basis. The network layer is also responsible for collecting and distributing status information.
Equipments for automation:

The realization of completely automated highway systems needs hardware both in infrastructure (roads) and the vehicles. Roadside monitors will measure traffic flow and speed, and vehicle paths will be calculated based on this information. Such measurements are currently made with loop detectors, ultrasonic sensors, avi tags or vision systems. Infrared beacons, broadcast and cellular radio, or using emerging ultra wideband technologies may communicate information.

The vehicles need a longitudinal sensor to measure distance and relative speed of the preceding vehicle. Such sensors may be based on radar, ultrasound, or vision. Microwave radar sensors perform very well in fog and heavy rain, but are expensive. Laser radar systems are low-cost, but cannot handle low visibility conditions. To facilitate lane changes at a range of relative speeds, the vehicle must be equipped with sensors that locate vehicles on the side with a longitudinal range of about 30m. Infrared and laser range finding techniques may prove to be in this area.

Besides headway and side sensor information, longitudinal and lateral velocity and acceleration, yaw rate, front steering angle, and lateral deviation data is needed to obtain a robust combined lateral and longitudinal control. All of these except the last one can be obtaining using on-board accelerometers and encoders. For vehicle position sensing, there are two alternatives such as magnetic makers, and vision systems.

Roadside-vehicle communications is also a critical aspect of a.h.s. Vehicles needs to be identified, speed must be communicated to vehicles, and actions need to be coordinated for a fully automated system

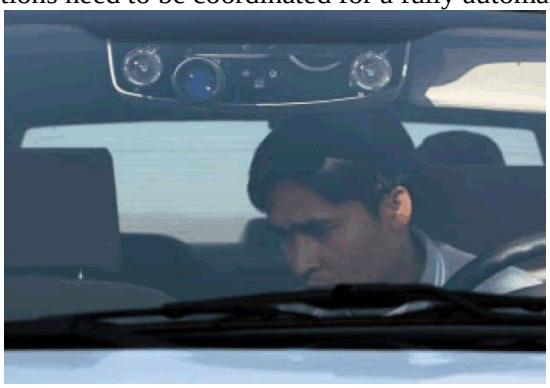

Fig. 5. a picture showing video camera fixed in an automated vehicle

Fig. 6. the picture shows magnetic sensor embedded into roads

Features of automated highway system:

The automated highway system is unique with its individual functions apart from the different control layers, they are:

- Auto brake (obstacle detection requirements): a serious performance issue arises in determining the obstacle detection requirements for the initial systems. It will be easier and economical to build a system that just tracks vehicles in one own lane out to, say, 100 feet than to simultaneously track vehicles in adjacent lanes, or see out to300. The choices here are made could have substantial impact on both system capability and the system cost.
- Auto brake (braking criteria): this design issue is a particular of the safety criteria issue, the determination of the criteria for a safe following distance. This involves assumptions about relative braking capabilities, road

surfaces, reaction times, and a few other secondary variables. The criterion chosen implicitly determines the trade between the safety and capacity. The system could be designed so that it is adjustable, so the initial choice could be readjusted as operational experience became available.

- Auto gap (sensor interpretation performance): this is based on how good the sensor and sensor interpretation system have to be in assessing the tactical driving situation. This function must be able to behave as a prudent and defensive driver would. This feature is most essential in lane changing, entry and exit maneuvers.
- Auto gap (communications with traffic management system)

Conclusions:

- An a.h.s. has slightly lower average fuel consumption than a non automated highway operating at free flow and much lower average fuel consumption than a non automated highway operating at congested conditions because of its smoother traffic flow.
- An a.h.s. operating at an average speed has substantially lower emissions/vehicle/mile traveled, than non automated highway operating at the same average speed.
- Vehicles in a platoon can expect an additional fuel savings and emission reduction due to the aerodynamic drafting effect which is dependent on the intra platoon vehicle spacing.
- Driving safety will be significantly appreciable in automated highway system than in non automated highways.
- Environmental impact of transportation due to emissions from the vehicles will be reduced in accordance to the smoother traffic flow.
- Ahs can restore free flow travel conditions from congested speeds in urban highway travel thereby reducing the travel times. In addition for long distance intercity travel, it permits higher cruising speeds than today's nonautomated driving.

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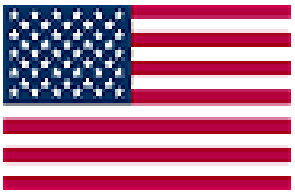
FORMS OF MARKET ORIENTATION OF FAMILY FIRMS: AN EMPIRICAL ANALYSIS



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Abstract

Family firms dominate the global business landscape. They account for nearly half the overall GNP and about 60 percent of the workforce in the United States. Employment in family businesses in India is almost 75 percent. Family firms are different from non family firms in being more risk averse and exhibiting a long-term rather than a short-term focus. While extensive research has been done on market orientation in non family firms, there is a paucity of research on the nature and forms of market orientation in family firms. This study analyzed a sample of 418 manufacturing and service oriented family owned businesses in the U.S. Cluster analysis identified four distinct clusters: “undeveloped”, “transitional”, “balanced”, and “comprehensive”. MANCOVA results revealed the performance of these clusters differed significantly across: growth in overall revenue, overall profit margin of various units, and return on capital. Implications of results for family firms in the Indian milieu are discussed.

BUSINESS ENVIRONMENT: TECHNOLOGICAL IMPACT ON TODAY'S BUSINESS

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Key words : Business Environment, Technology, Technological Environment, Changing phase

Abstract

Globalization has brought in numerous change and challenges for business. "The biggest challenge is global competition. There is very intense competition where organizations need varied professional skills" Prof. Lehmann, IMD, Lausanne. We can see a massive change in the business environment especially in technology and technological environment exercise considerable influence on business.

The biggest management challenge is to integrate business and technology. Managers must consider technology as an important factor in their decisions and implementation processes. Hence innovation and research and development are necessary to enhance technological growth. Technology is changing fast and to keep a pace with it managers and businessmen should be ever alert to adopt updated technology in their business. This research focuses on how technology has impacted today's business scenario.

2. INTRODUCTION:

"Technology is a gift of God. After the gift of life it is perhaps the greatest of god's gifts. It is the mother of civilizations, of arts and of sciences"

Freeman Dyson

The human race's use of technology began with the conversion of natural resources into simple tools. The pre historical discovery of the ability to control fire increased the available sources of food and the invention of the wheel helped humans in travelling in and controlling their environment. Recent technological developments, including the printing press, the telephone, and the Internet, have lessened physical barriers to communication and allowed humans to interact on a global scale. Technology consists of the apparatus, techniques and organisation. Apparatus includes tools and equipment, techniques include ways of using tools, work methods etc, and organisation includes social arrangements for productive ends.

Technology is the most dramatic force shaping the density of people all over the world. Some of the technological inventions the man feels are wonders, some others are horrors, and yet others have mixed blessings. Automobiles, televisions and telecommunications have evoked mixed reactions. Hydrogen bomb, sub-marine guns have proved to be horrors. Pharmaceuticals, open heart surgery robotics are wonders. Technology is one of the most vital driving forces in shaping up economies of various countries after World War II. It improves quality of life in the society. Technology is both hard and soft i.e. machine as well as way of thinking.

Technological environment have very important implications in business. The importance of technological environment is so tremendous that it brings new products processes and materials; it impacts directly to every aspects of our society like food, agriculture, industry, communication etc. Business organisations has to look into some important issues like the type of technology in use, the speed with which latest or new technologies are adopted and diffused, the level of development in technology, policies in technology etc.

Newly industrializing economies are confronted with a particular challenge to their future economic prosperity. Accelerating technological change in the microelectronics sectors in industrial nations continuously erodes the comparative advantage derived from relatively cheaper labour which industrial latecomers could in the past exploit for their own benefit in trade. This raises the spectre of increased marginalization of economically underdeveloped nations in the competition for world markets in high quality, customized, design and technology- intensive products. Unless ways are found for these countries to acquire the technological capabilities needed to narrow the technology gap that separates them from the industrialised countries newly industrializing nations would risk losing world market share in manufactured products.

However, not all technology has been used for peaceful purposes; the development of weapons of ever-increasing destructive power has progressed throughout history, from clubs to nuclear weapons. Technology has affected society and its surroundings in a number of ways. In many societies, technology has helped develop more advanced economies (including today's global economy) and has allowed the rise of a leisure class. Many technological processes produce unwanted by-products, known as pollution, and deplete natural resources, to the detriment of the Earth and its environment. Various implementations of technology influence the values of a society and new technology often raises new ethical questions. Examples include the rise of the notion of efficiency in terms of human productivity, a term originally applied only to machines, and the challenge of traditional norms.

3. OBJECTIVE OF THE STUDY

- To understand the role and impact of technology in business worldwide.
- To study the contribution of technology.
- To evaluate technological developments in India.

4. CONTRIBUTIONS OF TECHNOLOGY:

Industrialization:

Technology has contributed to the growth of industries or to the process of industrialization. Industrialization is a term covering in general terms the growth in a society hitherto mainly agrarian of modern industry with all its circumstances and problems, economic and social. It describes in general term the growth of a society in which a major role is played by manufacturing industry. The industry is characterized by heavy, fixed capital investment in plant and building by the application of science to industrial techniques and by mainly large-scale standardized production. The Industrial Revolution of 18th century led to the unprecedented growth of industries. Industrialization is associated with the factory system of production. The family has lost its economic importance. The factories have brought down the prices of commodities, improved their quality and maximized their output. The whole process of production is mechanized. Consequently the traditional skills have declined and good number of artisans has lost their work. Huge factories could provide employment opportunities to thousands of people. Hence men have become workers in a very large number. The process of industrialization has affected the nature, character and the growth of economy. It has contributed to the growth of cities or to the process of urbanization.

Urbanization:

In many countries the growth of industries has contributed to the growth of cities. Urbanization denotes a diffusion of the influence of urban centres' to a rural hinterland. Urbanization can be described as a process of becoming urban moving to cities changing from agriculture to other pursuits common to cities and corresponding change of behaviour patterns. Hence only when a large proportion of inhabitants in an area come to cities urbanization is said to occur. Urbanization has become a world phenomenon today. An unprecedented growth has taken place not only in the number of great cities but also in their size. As a result of industrialization people have started moving towards the industrial areas in search of employment. Due to this the industrial areas developed into towns and cities.

Modernization:

Modernization is a process which indicates the adoption of the modern ways of life and values. It refers to an attempt on the part of the people particularly those who are custom-bound to adapt themselves to the present-time, conditions, needs, styles and ways in general. It indicates a change in people's food habits, dress habits, speaking styles, tastes, choices, preferences, ideas, values, recreational activities and so on. People in the process of getting them modernized give more importance to science and technology. The scientific and technological inventions have modernized societies in various countries. They have brought about remarkable changes in the whole system of social relationship and installed new ideologies in the place of traditional ones.

5. TECHNOLOGICAL ENVIRONMENT IN INDIA:

Technological change refers to the changes in production techniques and production equipment. It could be a change in the machinery used to make a product or the computers to design a product. New production technology can increase the speed of production, improve the quality of the product and reduce costs per unit of production. A business can be affected by the following technological change: In production, in provision of services, in the office etc.

Technology today is used in business everywhere, easily bringing the world and all of its knowledge to seekers as fast as the click of a mouse. Information can be simple acquired virtually trouble-free through the use of computers, televisions, mobile phones, fax machines, printers, digital cameras and other accessible devices. Over the years technology has become very user-friendly. Technological advances have simplified every task involved in business merging many resources to one location that satisfies the user.

India is a country which is industrially getting advanced. There has been a rapid growth in the Indian economy after liberalisation. We can observe in India almost all industrial units of production like large, medium and small scale units.

India's Expenditure on R&D is less than 1% of GDP as against 2.5 % of developed nations and the GDP itself being very low compared to these countries, the absolute investment and expenditure on R&D is very poor (As against USA 247 Billion $ India had barely 3.5 Billion $s). Apart from this the contribution of Corporate India is poor (only 15%) in this. A good part of it goes into Strategic research budget like space and defence. Another Measure of technological Environment in the country is the Number of International patents filed by the Laboratories and Firms from a country. Just compare this for India with Lucent Laboratories USA (Now headed by an Indian), which files more than almost one patent every day. A third Measure could be the contribution of Capital Goods & Machine tools industry in the GDP of the Country. A fourth measure is the number and constitution of premier Technology institutes and Technical training Centers and Research laboratories in the country, including Communication and Information technology areas. For modern industry environment the skill level of workers has gone very high and the countries' basic infrastructure too is very important indicator. It is

very clear that any business investment will depend on technological Environment in the host country or a State beside Infrastructure availability, Taxation and Fiscal Incentives. Another important factor is availability of Power and Energy. By virtue of above technological Environment limitations, India is attracting second-rate technology investment. But India has definite advantage in Manual Skill and Knowledge based sectors like Software development, Call centers, Genetic coding and other such works which make India attractive in terms of English Speaking, technically qualified low cost workforce and low cost of operations in the country. Whereas a Dollar has value of Rs 50 in India, It has only value of Rs 22 in USA, based on PPP (Purchase power parity). That makes outsourcing from India attractive. China has still better advantage than India on this latter criterion.

Development of technology can take place through slow improvements, need for introducing new products, and outsourcing of technology from advanced nations. One important method for creating Technology environment is through creating Industrial clusters which are product focused like Hosiery in Ludhiana & Tirupur, Steel Rolling in Mandi Gobindgarh and Electronics in Bangalore and NOIDA.

5. IMPACT OF TECHNOLOGY IN BUSINESS:

Technology in business is a high-risk, costly and uncertain activity. The world has entered an age in which many of the easy inventions and discoveries have already been produced. To achieve breakthrough which has social significance and profit potentials for the originator, increasingly large investments in research must be made. Quantum leaps forward in technological benefits require greater managerial and financial commitments.

The combination of the telephone and the Internet will provide more uses and conveniences than imagined just ten years ago. The telephone is likely to be the pivotal technology, so that people will have personal numbers that can be taken with them as they transfer from job to job, and home to home. It is already possible to use the telephone for receiving email messages and surfing the net. Mobile phone carriers now allow you to pick a variety of news, sports, weather, and stock market reports several times a day. Telephones and Internet services are merging, bringing increased opportunities for business.

6. COMPANIES AND TECHNOLOGIES:

Overall improvement of a nation depends on many factors like economic environment, political environment, social environment and technological environment. Technological environmental factors influence the business firms in its different phases and depending on such influences a nation's economic developments is measured.

The mobile is the perfect example of a technology which led a disruptive change among many industries. Companies tried to win against this technology rather than among themselves. The businesses around digital camera, personal computer, MP3 player, calculator — all underwent a disruptive change. Many, like camera-makers, forayed into digital medium with high resolution as their forte. Others like the digital and wrist watch industry were severely impacted with the advent of mobile phone**.**

Google is an apt example of how a technological superiority can help overpower existing leadership. Google was a very late entrant in the search engine technology in 1998. Many popular web search engines were already launched like Infoseek, Webcrawler and Lycos in 1994, Altavista and Excite in 1995 and AskJeeves in 1996. But Google captured the market in just 4-5 years of it being launched, based upon the superior algorithms and search technology. Similarly, the Apple iPod has been able to capture the worldwide portable media player market over other players like Zen, Samsung, Archos based on superior sound and storage quality.

Technology also forces existing leaders to change their business strategy. For instance, the mobile phone operators all over the world are shifting to IP technology because of its disruptive nature. While operators themselves have become ISPs, in India they are opposing the opening up of the domestic internet telephony as it will drop the prices of call rates drastically is another example of a technology changing consumers' lives and thus business strategies.

7. R & D IS NECESSARY FOR TECHNOLOGY TO EVOLVE:

The business firms with high vision to stand ahead of others adopt technology and also try to find number of ways to improve business from its current position. Such businesses will be very sure that they cannot stand for a longer period if they adopt old outdated technology. They always prefer innovation in every step of business. If a technological concept provides competitive advantage and determines success to the business firm it can be called as innovation.

Research and development has given importance not only in large industries but also in other companies in order to develop the country on the whole. With the help of R & D, any company can know the needs, wants of its customers. With the help of technology, they can produce the products with the required features.

Every year around $1 trillion is spent on research and development (R&D) in computing, telecoms and electronics; America accounts for over one-third. But while corporate R&D in America and Europe grew by 1-2% between 2001 and 2006, in China it soared 23%. China is now close to surpassing Japan in total research spending, from almost nothing a decade ago. And as a percentage of GDP, China's corporate R&D spending is almost on a par with the European Union's (around 1%). The OECD's numbers show that Taiwan now has more high-tech researchers than Britain. And a list of the world's 250 biggest technology firms shows that Taiwanese companies spend more on R&D than British and Canadian ones. That said, the types of job are different: the Taiwanese generally do lower-end work like making semiconductors. More sophisticated tasks, such as designing the chips' circuitry, are still mostly done in the West.

The most impressive growth has been in South Korea. In 2007 Samsung spent more on R&D than IBM. The company has jumped to second place in the number of patents granted by America's patent office (just behind IBM); a decade earlier it was not even in the top ten. South Korean firms spend more on R&D as a percentage of sales (6.5%) than European and Japanese firms (around 5%), and are catching up with American ones (about 8%). South Korea now has more high-tech researchers than Britain and Germany.

Toyota spends an average of $22.7 million per day on research and development, according to James Press, president of Toyota Motor North America. Microsoft Corp. CEO Steve Ballmer says the Redmond, Wash.-based technology firm will spend more than $6 billion in research and development in 2006. And aerospace giant Boeing Co. said in July that it expects R&D outlays to be approximately $3 billion in 2006 and 2007, "reflecting higher investment in planned product development programs such as the 787, 747-8 and international tanker."

Industrial expenditures on research and development are forecast to reach $211.9 billion in 2006, an increase of 3.5% over the previous year, according to the annual *Battelle-R&D Magazine* forecast issued in January. More recently, Boston Consulting Group (BCG) released survey results that show 72% of companies worldwide will increase spending on innovation in 2006.

While research and development is an important component of many manufacturers' business strategies, determining how much to spend and on what projects is no easy feat. Indeed, "one of the

most common questions we get asked by senior executives is, 'How much should I be investing?'" says BCG's James P. Andrew, Chicago-based senior vice president and head of the consulting firm's worldwide innovation practice. "And competitive benchmarking is rarely useful -- the required level of detail and comparability simply cannot be obtained in most cases."

In India, about 70 percent of R&D is performed by the central and state governments, an additional 27 per cent by enterprises (both public and private sector industries), and less than 3 per cent by universities and other higher education institutions. In contrast, in most countries in the Organisation for Economic Cooperation and Development (OECD), the private sector finances 50-60 per cent of R&D, because it increasingly has the finance, knowledge, and personnel needed for technological innovation. In the case of Government funded R&D, defence sector continues to garner maximum funds with 60 per cent of the total allocation. There is a diminishing investment in industrial R&D with the belief that the corporate sector has to take up the responsibility. Spends on R&D by the Indian firms continue to be considerably lower than their global competitors as a percentage of their sales turnover. About 86 per cent of the country's joint stock companies, out of the total of 8,334, do not depend on R&D at all. Even among the relatively big investors on R&D, there are only seven Indian firms, which spend more than Rs. 50 crore per year, while there are about 463 companies spending less than Rs. 1 crore. Firms play a bigger role in R&D in Ireland, Japan, Korea, and Sweden. Universities also undertake research to a much larger extent in developed countries and have stronger linkages with the corporate world.

8. IMPACT OF TECHNOLOGY ON SOCIETY:

Society also determined the changes that were made to the previous generation media player that the manufactures developed. Take for example, today's media players. At the beginning, cassettes were being used to store data. However, that method was large and cumbersome so the manufactures developed compact disks, which were smaller and could hold more data. Later, compact disks were again too large and did not hold enough data that forced today's manufactures to create MP3 players which are small and holds large amount of data. Today's society determined the course of events that many manufactures took to improving their products so today's consumers will purchase their products. Technology has helped develop more advanced economies including today's global economy and has allowed the rise of a leisure class. Various implementations of technology influence the values of a society and new technology often raises new ethical questions

9. UNETHICAL ACTIVITIES ASSOCIATED WITH TECHNOLOGIES:

Technology leads to greater social economic division. Laborers are viewed as commodities and expendable. Technology leads to alienation because it can create jobs that require no specialist knowledge. The internet in its current form was developed as a free exchange of information, unregulated by any one government or owned by any one person or company. In its raw form it was the playground of hackers and computer geeks, who challenged the status quo. It brings about a new era, the technological revolution. The free flow of information has brought about technological advances at an unprecedented rate and has made many rich and brought companies who failed to adapt to a standstill. Knowledge is power, and with access to tapping phone lines, reading emails, reading your credit card statements, knowing by GPS where you are by tracking your mobile phone, it can be a scary world, if all that knowledge and power were to be used to oppress and control.

10. CONCLUSION:

The changes in technology are so rapid that the Industry has to always keep pace of the same and keep updating and modernizing to remain competitive in business. Resisting the tide of technological change is impossible. Of course it is possible to do business without a website or email or mobile phone or a fax machine. People have been doing business well before any of these gadgets were invented. But business today is about competition, and technology is about leverage. Technology is the most dramatic force shaping the density of people all over the world. Business today is inextricably intertwined with technology, from the smallest home office, to a multinational corporation with multiple monolithic

legacy application. It is impossible to be in business today without confronting the issues of technology. The way we do business today is different than 30 years ago. Technology has evolved around the areas of telecommunication, travel, stock market, shipping even around our daily lives.

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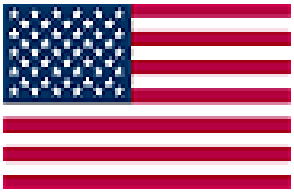
NETWORKING STRATEGY IN THE REAL ESTATE INDUSTRY: THE AMERICAN PERSPECTIVE
AND
APPLYING FOR A REAL ESTATE LICENSE IN THE UNITED STATES



Donna Ruse
Re Max of Findlay, Ohio, USA

Abstract

While Twitter, Face book , Hi5 and MySpace may be popular social networking strategies , the strategy for bringing together buyer and seller in a real estate transaction is much more difficult when the transaction will take place in a strange land. Moreover, the cost of a bad decision can be disastrous – from foreclosure to bankruptcy. In these turbulent financial times risks are magnified more so than at any time in the past.

There are networking strategies that can be used when considering the purchase of a home or business in the U.S. These are listed in order of priority and assume a move from India to the United States. Personal referral and Realtor.com are the best choices:

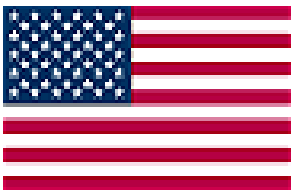
1. If you have a friend or relative in the city or town in where you plan to live or purchase a business, ask that person to suggest a Realtor – preferably one that works full time and has several years of experience.
2. If you don't have a friend or relative, consider contacting a professional in the community that is from your country. Physicians or engineers practicing in the U.S. can be very helpful in suggesting a Realtor.
3. Log onto Realtor.com and Google the area you are interested in
4. Contact the local Chamber of Commerce in the community. They will have a list of Real Estate brokers and most all are members of their local chamber.

Real Estate Licensure Requirements

Licensure laws are different in each of the fifty states in the United States. The information below is based on the laws in the State of Ohio, the 7th most populous state in the U.S.:

1. Realtors generally practice as independent contractors and are paid a commission which is based on the selling price of a property. You must be licensed by the Ohio Department of Commerce to sell real estate.
2. Prior to applying for a real estate license, interested persons must complete four courses of licensure education in an institution of higher education.
3. Following satisfactory completion of the above courses, a Real Estate Broker must sponsor the applicant to sit for the real estate examination.
4. Success in passing the examination results in receipt of your real estate license but within a year of receiving the license you must take an additional 10 hour post licensure class.
5. In order to maintain your license you must take at least 30 hours of continuing education every three years.

EVALUATION OF CHINA FOR BUSINESS INVESTMENTS



Chintan Piyush Shah
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INTRODUCTION

China's economy during the past 30 years has changed from a centrally planned system that was largely closed to international trade to a more market oriented economy that has a rapidly growing private sector and is a major player in the world economy. China is the third largest economy in the world after US and Japan, and the second largest in the world after the United States when measured in terms of purchasing power. China has got the fastest growing economy for the last thirty years with an average annual GDP growth rate of more than 10%. China exports goods worth US$ 1.43 trillion which includes office machines and data processing equipments, telecommunication equipments, apparel and clothing and miscellaneous manufactures and to EU, USA, Japan and Hong Kong. China imports US$ 1.13 trillion worth of goods, which mainly include petroleum and related products, professional and scientific instruments and metal ores and scrapes. China's foreign trade has increased faster than its GDP in the last twenty five years.

CULTURAL CLIMATE AS IT AFFECTS INTERNATIONAL BUSINESS

- Treating people according to the hierarchy is very important. The highest ranking member in the company will be the first to meet you. Treating them with respect will lead to smooth relationship.
- Face: It roughly translates as personal prestige. It is very important while doing business in china that you keep the face in front of others. If by any action you lose the face then it is very difficult to do business in the Chinese market.
- The Chinese are not very keen on physical contact when doing business. Business cards are exchanged on first visit and it is always a good idea to have printed a translated version in Chinese and in golden letters as it is considered auspicious. The Chinese like you to inspect the exchanged card for a while before putting it in.
- It is very important to end the first meeting with a small gift to the Chinese counterpart to end with a message that you want the relationship to be a long term relationship.
- Appointments are less driven by the exact start and end times.
- Chinese people like to work in groups and they are "WE" oriented than "I" oriented.

All these points put together make China a different place to work and therefore might require some time getting used to the culture and methodology. Overall once used to the culture China is a great place to work which offers long term partnerships and good quality of work wich is reliable and can be banked upon.

POLITICAL CLIMATE AS IT AFFECTS INTERNATIONAL BUSINESS

The Republic of China is a Communist state headed by Hu Jintao , the President and Xi Jinping the Vice- president, both members of ruling Communist Party of China. The primary organs of state power are the National People's Congress (NPC), the President, and the State Council. The politics in China has always helped the growth of international trade. It has shown its support by opening various Special Economic Zones (SEZ) that international companies can take advantage of and invest in China. The politics in China is favored for investment in China. The investment in china has been one of the factors for China's rise as a world class economy. In 2001 when China joined World Trade Organization (WTO) the Foreign Direct Investment Increased and that showed the political will of the government.

The business investment has grown at a very fast rate and the government has lacked the pace to regulate the investment. Due to the lack of government controls there are lot of loop holes and business can go to great extents to increase profit margin, like compromising safety norms. Ever since the restrictions on foreign trade were reduced, local companies can indulge in foreign trade without much intervention of the government.

FINANCIAL CLIMATE AS IT AFFECTS INTERNATIONAL BUSINESS

China's financial condition is very good. One of the most important factors for that is that over 98% of the banking assets are state owned. The chief instruments of fiscal and financial control are the Peoples bank of China (PBC) and the Ministry of Finance, both under the state council. China is constantly trying to improve the financial conditions through reforms. China has granted greater powers to the foreign banks in China, the National People's Congress has passed the Bankruptcy law, there is improvement in the credit information database and privacy law. The financial condition looks good with the Shanghai Stock Exchange rising 67% between January and June 2007. The NYSE has offices set up in China, which shows the growing confidence of the world in China's financial strength. The PBC is responsible for the international trade and overseas transactions. The financial climate was spared to a lot of degree during the recent financial meltdown due to its state owned nature. The financial climate is friendly and excellent to invest in with a bright future.

CONCLUSION

The great combination of extremely low labor costs, a tremendous buyer's market in China itself, an increase in the buying power of the Chinese residents and the ease of Chinese laws concerning foreign investment coupled with cultural, political and financial stability in China makes it one of the best places in the world to invest. With a growth rate as high as 10% and forecasted to be in that range for the coming decade China is a safe place to invest with a good return on the money that one invests.

FIGURES FROM CHINA

GDP (Purchasing power parity)	**$ 7.992 Trillion (2008 est.)**
GDP (Official Exchange rate)	**$4.327 Trillion (2008 est.)**
GDP Real growth rate	**9% (2008 est.)**
GDP per capita	**$6000 (2008 est.)**
GDP Composition by sector	**agriculture: 11.3%; industry: 48.6%; services: 40.1% (2008 est.)**
Labor force	**807.3 million (2008 est.)**
Investment (gross fixed)	**40.5% of GDP (2008 est.)**
Budget	**revenues: $847.8 billion; expenditures: $861.6 billion (2008 est.)**
Inflation rate (consumer prices)	**5.9% (2008 est.)**
	9.3% (2008 est.)
Exports	**$1.435 trillion (2008 est.)**
Imports	**$1.074 trillion (2008 est.)**
Reserves of foreign exchange and gold	**$1.955 trillion (31 December 2008 est.)**
Exchange rates	**Renminbi yuan (RMB) per US dollar - 6.9385 (2008 est.)**

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CORPORATE SOCIAL RESPONSIBILITY (CSR): RAIN WATER HARVESTING

John Daniel
Great Bear Promotions, Bangalore, INDIA

Corporate response has often meant an adoption of 'a new consciousness', and this has been known as Corporate Social Responsibility (CSR) since the 1970s. CSR of a company should be undertaking all actions that would maximize the probability of its long-term survival and sustained growth of society. It is the much used buzz word in contemporary world did not exist in the old world wisdom and depth where surface intelligence and skin deep information was of no importance. Today's situation on water scarcity that the world is facing brings about the CSR for rain water harvesting. Lot of work has been done and a lot more is left to be carried out. This is a collaborative community activity. Corporates can be involved in this activity both within and outside the boundary. It's a huge open ended opportunity to improve upon.

In More Conscious Terms: CSR is Civil Society Rain

a. The global state of humanity's consumable water (reserve 3% of the total water reserve)

Water availability per capita has been on the decline in India. Two reasons have been the increasing demand for water and the increasing population. The quantum of water available to the country being fixed the increasing demand reduces per capita water availability. Ground water sources are increasingly getting depleted or are getting polluted. Bore wells are either silting up, getting short of water or are drawing polluted water.

b. How important is water as a commodity?

Water is a basic human right. Water is the essence of life. Without water human beings cannot live for more than a few days. Water plays a vital role in nearly every function of the body, protecting the immune system, the body's natural defenses and helping remove waste matter.

c. How we handle it and our attitude, responsibility towards it?

Rain water harvesting has gained great interest throughout the world in the past few years. Governments are taking initiatives to make it mandatory. Corporate, educational institutions, religious institutions, etc. are taking up the responsibility of doing their best in this sector. RWH makes ecological and financial sense not to waste a pure natural resource available in large quantity.

RWH encourages water conservation and self-dependence. RWH is being recognized by people from various sectors, who have to become partners in the solution process and not remain simply as institutional beneficiaries (CSR). It encourages water conservation and self-dependence.

WHAT IS RAIN WATER HARVESTING?

The term rainwater harvesting is being frequently used these days; however, the concept of water harvesting is not new for India. Water harvesting techniques had evolved and developed centuries ago. An old technology is gaining popularity in a new way. Rain water harvesting is enjoying a renaissance of sorts in the world, but it traces its history to pre-biblical times. Extensive rain water harvesting apparatus existed 4000 years ago in the Palestine and Greece. In ancient Rome, residences were built with individual cisterns and paved courtyards to capture rain water to augment water from city aqueducts. As early as the third millennium BC, farming communities in Baluchistan and Kutch impounded rain water and used it for irrigation dams.

Ground water resource gets naturally recharged through percolation. But due to indiscriminate development and rapid urbanization, exposed surface for soil has been reduced drastically with resultant

reduction in percolation of rainwater, thereby depleting ground water levels. Rainwater harvesting is the process of boosting the natural filtration of rainwater in to the underground formation by some artificial methods. Conscious collection and storage of rainwater to cater to demands of water, for drinking, domestic purpose and irrigation is termed as Rainwater Harvesting. The quantity of water that can be harvested from a 1000sq. ft. roof area during an average of 60 days rainfall per annum is approximately one lakh litres.

WHY HARVEST RAINWATER?

It's a shame to let runoff go to waste when it can be used indoors and/or for irrigation. Due to rapid urbanization, infiltration of rain water into the sub-soil has decreased drastically and recharging of ground water has diminished. Surface water is inadequate to meet our demand and we have to depend on ground water.

The benefits of rainwater harvesting can include:

- Relief of strain on other water supply
- Ability to build or farm in areas with no other water supply
- Cleaner water
- Increased independence and water security
- Lower water supply cost
- Reduced flood flows
- Reduced topsoil loss
- Improved plant growth
- Greater sensitivity to and connection with natural cycles

About Great Bear Promotions

Focus Area - Promoting Clean Technology Initiative with Special Emphasis to Water Segment. Campaign to Promote Water Literacy, in the area of Water Harvesting, Conservation and Usage Practice Method.

'Promoting Clean Technology Initiative' is what Great Bear Promotions believes in as a part of its responsibility for enabling people to make optimum use of nature's generosity. Promoting Rain Water Harvesting in the UN declared water decade – 2005 to 2015 "Water for Life", has been seriously practiced towards meeting this goal. We work with Karnataka State Council for Science & Technology. We cater to all projects in independent & group housing, apartments, MNC's, factories, schools, commercial establishments, layouts etc. with detailed project reports done by the government scientists.

Our RWH Ambassadors:

- **Reputed organizations:** International Tech Park, Taj ITPL, Karunashraya – Bangalore Hospice Trust, Home for Cancer patients Daughters of St. Camillus, Mallige Pharmaceutical College, GKVK Agriculture College, K.C. General Hospital, Memorial Church, Pharmaceutical Godowns, Institution of Agricultural Technologists, Sigma Arcade, Chord Road Hospital, CMR Engineering College, Maharani Ammani College, RSI Club, BTL Engineering College, Unnati (NGO), SOS Children's Village – Program sponsored by Coco Cola India, Printman India, Triveni Aeronautics, etc.

BLUE PRINT FOR ADVENTURE BASED ECO-FRIENDLY EXPERIENTIAL LEARNING CENTRE - POWERHOUSE OF KNOWLEDGE IN HOLISTIC LEARNING

Vasudevan
Infosys, Chennai, INDIA

ABSTRACT

Need for the experiential learning centre

- The psychology of the modern Indian traveler toward excitement and adventure. The relationship between the corporate India and experiential learning.
- The history and benefits of experiential learning.
- The spread of experiential learning in the world.
- The growth of adventure tourism and the impact of 'Incredible India' campaign in India's tourism.

Contributions of the centre

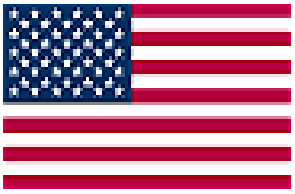
- The study of consumer demand and operator support for Socially and Environmentally Responsible Tourism
- Catalyst to tap the untapped potential in adventure sport tourism (since many Indians are going aboard for adventure sports).
- Benefits of each activity to the Corporate World
- The choice of the building materials and other eco-friendly ways of constructing the eco-friendly building
- The empowerment of the local community around the centre

Facilities

- The visitors would go through an ecological adventurous journey
- Space for each adventure sport activity
- Academy for experiential learning
- Viewing decks from mountain tops
- Housing for the staff
- Resorts

EVERYTHING FOCUSED ON IMPROVING TODAY'S CORPORATE MANAGEMENT…

SUPPLIER COMMUNICATION WITHIN THE COUNTRY AND ABROAD: SIMILARITIES AND DIFFERENCES



Cynthia Thompson
Hexion Specialty Chemicals, Inc.
and The University of Findlay, USA

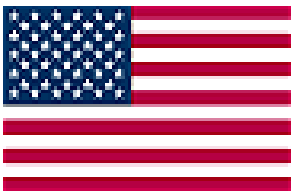
ABSTRACT

As companies become increasingly globally focused, managers must be prepared to work with colleagues and suppliers whose cultural experiences, personal and business motivations may be very different from their own. Additionally, managers may find themselves living and working in one region, but managing business in another part of the world. Understanding the challenges of building and maintaining strong relationships across time, distance and culture is one key to successfully working in a global economy.

This presentation draws from personal experience as well as professional literature to address the issue of the similarities and differences between managing domestic and international relationships with peers and suppliers. It considers the barriers created by time and distance, the potential pitfalls of language and culture, and the opportunities to overcome those obstacles and develop global partnerships.

Significant written material exists on the subject of conducting business across political and cultural borders. Nevertheless, as this author has learned, personal experience is often far removed from initial expectations and requires persistence, flexibility and a willingness to learn. Anecdotes from encounters with colleagues and suppliers from such diverse places as China, Qatar, Italy and Japan serve to illustrate the struggles and triumphs of building global relationships.

WORK FORCE ATTRITION - A MAJOR CHALLENGE IN THE IT INDUSTRY



Padmavathi Dasharatha Yata
ICRISAT, INDIA
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ABSTRACT

"Workforce Attrition" or "Employee Attrition" is a cause of major concern in every field in today's world. As compared to the other work areas, IT industry happens to be the target, facing heavy workforce attrition. The IT industry, being a knowledge-based sector, requires a workforce that is highly competent. Also, the demanding nature of work in the industry requires effective strategies to retain its workforce. With growing demand for Indian IT professionals overseas and with multinational IT companies establishing their offices in India, retention becomes very difficult. To handle the challenge, companies have started using a variety of retention tools such as **Employee Stock Ownership Plans** (ESOPs) and **Restricted Stock Units** (RSUs). This paper provides an overview on analyzing the management of human resource in the IT industry with a special emphasis on the factors responsible for the high rate of employee attrition or turnover in the industry.

INTRODUCTION

RECESSION in global economy, especially, in the United States, has affected the job scenario over the world. India too has been reeling under such pressure. Amidst the fear of retrenchment and uncertainty caused due to the global financial crisis, various sectors like financial services, tourism sector, aviation industry and the most volatile information technology and information technology enabled services (ITES) sectors have witnessed a steep increase in '**attrition**' rate as compared to last few years. Usually, people have a misconception amongst some generally used terms associated with "**Recession**". Though terms like layoff, attrition and voluntary separation mean reducing the workforce, they have significances of their own.

Important Terms related to "Attrition" and difference between them

Layoff refers to the temporary or permanent termination of an employee because of economic conditions, rather that poor performance or violation of company policies.

Attrition is the process by which a payroll is reduced by retirements, death and voluntary departures.
Voluntary separation means an employee has left the company on his or her own initiative, sometimes in response to a buyout offer by the company.

Overview of Issues – This paper discusses the following areas within retention.

- Trends in attrition in the IT industry in India in comparison with UK and USA
- Drivers or causes of attrition in the IT industry
- Various retention strategies formulated for retaining employees
- Importance of recruitment, compensation & rewards, work-life balance, learning and development, organization culture and leadership in reducing attrition
- Solutions for employee retention

➢ TRENDS IN ATTRITION

1. 'Poaching' of employees by rival IT firms, which means luring skilled employees of a rival company by offering better pay and fringe benefits (yr 1995)
2. More software professionals immigrating to foreign countries, particularly to the US.
3. Y2K problem was hanging over companies across the globe and software services from Indian IT service companies were increasingly in demand (yr 1998).
4. High rate of issue of H1-B visas by the US to Indian IT professionals and the average starting yearly salary in computer software jobs, in that year was $ 60,000 - nearly 10 times the average salary for a computer professional in a comparable job in India.
5. The employee turnover in 1999-2000 in Indian IT companies was around 15-20% with the cost of replacing an employee running at over 120% of the salary per employee.

Topmost Firing IT companies in India

1) **IBM** --- In the last 6 months, this company has fired nearly 20% of their employees because of BG check and performance issues. This is the most insecure don't have any strategic plans at HR policies regarding employee security. No appraisals (maximum 10%).
2) **TCS** --- Previously its an government IT Company, recently they fired on 500 people with below 2 years of experience as TCS lost so many projects especially British Telecom Projects
3) **Accenture** --- The firing rate is around 5%. This depends upon outsourced projects; they have a unique system where Accenture development centers around the world bid for a project coming into the company. Currently Philippines centre is taking the cake and the Indian centers are in a firing mode.
4) **WIPRO** --- Firing people with very frequent back ground checks and firing them with out even experience letters and relieving letters (will mention as terminated from services) but will promise the employees that they will retain them. After the project is over they will fire away.
5) **Intel** --- Running in heavy losses, hence firing 3000 employees in the Bangalore center in a phased out manner.
6) **CTS** --- Has a steady firing policy (checking the Educational background and previous employment and also employee performance in work). In a Recent HCL walk-in, around 50% attendees were from this company. Sadly the I-pods have not helped them.
7) **CSC** --- Excellent package but fires folks in Background check and those on bench regularly. Recently fired 400 employees from its subsidiary Covansys.
8) **Satyam** --- Currently stopped firing. The Attrition rate is very high. No firing from 2005 until now when 1000 employees were fired in Hyderabad.
9) **Patni** ---- They fired so many employees that currently they are facing understaffing and deficiency with number of employees. Very high attrition rate.
10) **Keane India** ---- This USA based company is always involved in firing employees. Recently fired java and as400 professionals, after which most of the employees have started to pack their bags. Employees change this company within 1 year.

Top Ten Secure IT companies in India

1) **Microsoft** --- Has projects till 2050.
2) **EDS** --- Most secure company in India. Not laid off any of its employees even during 2001. Has lots of projects in Defense and financial areas
3) **HP** --- Dream Company. In-house and outsourced projects
4) **Infosys** --- Dream Job. On a way to achieve the status of a secured, stable Govt. company.
5) **AOL, Google and Yahoo** - Best companies to work with, great job satisfaction as well as great salary and work environment. Rarely fires an employee. As they are internet based companies' they offer lots of opportunities to grow.
6) **HCL** -- A good company to be in. Called as a "retirement company."
7) **HSBC**--- This is the most secure company. It has never fired any employee, even when they

know that the employee is showing fake experience.
8) **Aricent**--- communication based software company, that has never fired any employee and gives great perks & incentives, lot of projects in kitty. It has minimal level of attrition.
9) **CGI** --- CGI is a Canada based company, it never fired any permanent Employee in the history.
10) **GENPACT**--- It is USA based company, mainly famous for its BPO sector
It has also a software section and it fired a few employee who violated its integrity rule, generally this company known as a employee satisfied company.

- **KEY CAUSES OF ATTRITION**
  - **Resignations/Retirements**
  - **Layoffs**
  - **Outsourcing**

Resignations/Retirements

Generally people do crib about money, not good perks and facilities but if they are happy and satisfied in their job, they stay for the sake of that happiness. People also join organizations for their need for socialization. When they form friends at their work stations; they appear to be more enthusiastic and look forward coming to office every morning. People leave because of boredom and disenchantment from everything. They find no other recluse other than leaving towards somewhere else. Most employees leave their work for reasons other than money. Most leaving employees seek opportunities that allow them to use and develop their skills. Leaving employees want more *meaning* in their work. They often indicate that they want to use their qualities and skills in *challenging teamwork led by capable leaders* while some people separate out of their own will or by superannuation.

Layoffs

Layoffs impact individual employees and their lives and they also affect the performances of companies because they often end up losing right people resulting in loss of talent. Though voluntary attrition level is down by more than 400 percent when compared with numbers one year ago, the low morale among staff makes the talented bunch look out for safer jobs. "Leaders should understand the motivational needs of their employees if they want to successfully fight economic slowdown," says Heckman.

The best solution the experts suggest is to reward the performer. Giving incentives for performance, giving learning opportunities, visibility for talented individuals and even time-off from jobs are ways of encouraging employees. HR practices like massive layoffs and across the board salary cuts without distinction of performers or non-performers can also prove counter productive. A company should give a feasible time for non-performers to improve and reward performance, only then take necessary action.

Outsourcing

The world seems to be catching up with India's IT and off-shoring prowess. In the last one year, several countries have grown and consolidated their position as alternative offshore destination.

Reacting to the study, Raj Bowen, managing director (India) of Personnel Decisions International, an international HR consultancy company said, "The US, Europe and Japan are facing the major brunt of recession. They have no choice but to cut cost and send jobs offshore to be more cost affective."

Lot more jobs will get outsourced to India, as the country is better positioned to handle it. India has cost advantage, in addition to a huge pool of IT talent who are fluent in English. There is also the benefit of having had a head start and a sound infrastructure.

"Given the current financial turmoil, cost will remain an important factor. However having the right balance between lower cost and higher risks, and lower risks and higher costs will be critical in times of recession and uncertainty," said Marriott.

❖ **Opinions on attrition from different levels of the Organization**

Managerial staff cite "career growth" and "leadership" as the major factors that influence attrition and retention, together with "opportunities for management" "ability of top management" "use of skills and abilities" and work/family balance.

Professional employees cite concerns about "supervisory coaching and counseling," "company direction" and interesting work.

Clerical employees voice concerns such as "type of work," "use of skills and abilities" and opportunities to learn.

Hourly employees notice whether they are treated with respect, have capable management and interesting work.

➢ **SOLUTIONS FOR EMPLOYEE RETENTION IN IT COMPANIES**

Employee attrition can be minimized and brought under control by introducing or enhancing few methods, like HR practices, Employee Retention Tools and conducting Exit interviews which are as follows:

- **Enhancing HR practices**

Recruitment- Effective recruitment strategies can help organizations in employee retention.

Compensation and Rewards-Incentives to employees play a vital role in motivating and retaining them in the organization.

Organization Culture-Organizational culture affects and regulates the way members of the organization think, feel and act within the framework of that organization and enhancing it helps in retaining them within the organization.

Work-Life Balance- A balance between work and the personal goals and wants of an employee contributes positively to the retention of employees.

- **Deploying Employee Retention Tools**

Restricted Stock Units (**RSUs**), or the restricted stock is a discriminatory executive compensation/bonus incentive plan designed to award incentives to executives and reward them for making the company more profitable and, presumably, growing the value of the company stock. But this is all done in taxable accounts with the restricted stock treated as W2 income once the restrictions have been met and the executive is in constructive receipt.

Employee Stock Ownership Plans (**ESOPs**) are non-discriminatory qualified retirement profit sharing plans with employer contributions made exclusively in company stock. The trust/account holding the stock must meet all the provisions outlined in sect. 401(a) for qualified plans. So although both of these involve company stock, they are contributed to, managed and become taxable in completely separate ways.

Indian software companies are looking at rewarding their employees through a instrument called restricted stock or Restricted Stock Units (RSUs) instead of Employee Stock Ownership Plans (ESOPs). Wipro is looking at issuing restricted stock units for its employees. Wipro's objective is to have a deferred salary component that locks in the employees for some years.

- **Conducting Exit Interviews**

Exit Interviews are feedback from people leaving the organization. More firms are opting for **"exit interviews"** to cut attrition. Since the cost of losing people is high, and many

employees can hold back their reasons for quitting, some firms are even farming out exit interviews outsourcing them to external HR consultancies to make the purpose more objective.

There are many Indian firms that have benefited by taking feedback from people leaving them. Technology services firm Cognizant Technology Solutions Corp. is one of the companies, which hires graduates from top business schools as analysts, and they have realized from responses in exit interviews that those employees leaving were looking for domain expertise—specialization in areas such as banking, insurance, logistics—instead of being assigned to any business unit.

Another way in which companies try to make the exit interview more meaningful is by deferring it by a couple of months. A talk over the phone after a few months, when the former employee no longer feels strongly about the reasons for his/her exit, sometimes yields better results, as said by E. Balaji, Chief Executive Officer of Ma Foi Management Consultants Ltd. This is a staffing firm and consultancy that has conducted nearly 500 exit interviews for about five companies.

❖ **Costs that Companies incur during Employee Turnover/Attrition**

a) Recruiting and hiring new employees.
b) Training costs-including management time.
c) Ensuring full pay and benefits during training, before full productivity is reached.
d) Avoiding lost sales and alienated customers during training.
e) Realizing the cost of mistakes and service inefficiencies made by new, inexperienced employees.
f) Loss of customers loyal to departing employees.
g) Loss of knowledge and experience built up by departing employees.
h) Lost or damaged relationships with suppliers.

❖ **How Companies are handling the Attrition problem**

Companies like ***Bausch and Lomb*** have understood the importance of this aspect of human need. While undertaking recruitment in Bausch and Lomb, the HR managers ensure that the candidate has potential for coaching, mentoring, has the right amount of warmth, effective relationship management and well demonstrated enthusiasm.

Satyam Computers India is fighting attrition by infusing individualized responsibilities and developing leadership in its every associate. They have initiated specific incentives for specific groups which are different for entry level positions, middle level, senior managers, fast trackers and its overseas associates instead of general benefits for each one and everyone.

Empirical studies conducted by ***Maslach and Jackson*** (1998) yielded three important variables related to burnout and eventual attrition among practicing school psychologists. These included emotional exhaustion, an increased sense of depersonalization, and a sense of reduced personal accomplishment. In addition, such factors as differing personality traits, specific working conditions, a lack of proper peer support, limited supervision, and unrealistic expectations by those unfamiliar with the specific purpose of the profession likely have contributed to the early departure of many newly arriving professionals (Kaplan & Wishner, 1999).

Investigating the entrance and exit data for the profession is necessary to determine such factors as employment statistics, the current composition of the profession (age, ethnicity, experience, etc.), district needs, and the quality of service provided to children in particular schools (Wilczenski, 1997). Further, it is imperative to identify the factors leading to poor job performance and attrition in school psychologists before they begin to negatively impact the children these professionals are intended to help (Huebner, 1993).

Even though the whole job market scenario seems bleak in the backdrop of economic downturn, it is widely accepted that those industries that are closely related to US economy are likely to feel the heat more than the others. The biggest cause of job loss has been ascribed to US economic slump and the immensely affected are IT and ITES firms. Though it was obvious that the US slowdown would hurt Indian firms, an analysis shows that the big firms have been hurt much less than the smaller and mid-sized ones. Many small IT and ITES companies have started winding up and big companies are on cost-cutting spree.

According to some analysts, the normal attrition rate in IT industry was anywhere between 20-40 per cent, which has witnessed a drop to single digit now, whereas the business process outsourcings (which had a high attrition rate of around 60 per cent) have nose dived to below 20 per cent. The basic reason behind the drastic drop is the fear caused by the global crisis and downturn in economy.

Indian IT-ITES companies have also undertaken labor-cost rationalization by getting rid of non-performing workforce and by tightening recruitment policies. As the economy dips, the list of corporate layoffs seems to gain momentum. With the economy slumping, big companies are not relying as much on consulting firms and start-up tech companies no longer have the cash to go all the way to hire more professionals.

❖ **Key Methods to <u>Curb Employee Attrition Rate</u> in IT Companies**

Nowadays with the huge demand for Software Professionals around the world and with the company willing to pay high salary package software professional tend to switch companies. But companies can reduce the employee attrition rates by taking few steps.

- Picnic / Outings

Too much work and stress takes a toll on the body and smaller chunk of employees leave because of **health issues**, too much stress, family pressure. Regular picnics and outings for Lunch/Dinner makes him/her body relax and feels comfortable. Make the employee feel that I am working from home and not from office.

- Performance Review

Regularly taking performance review either 3 Months/6 Months to inform the employee about his/her performance and also inform him/her about the improving areas. If you are performing well it gives the employee a sense of confidence and might perform well to improve more. By performing well he/she might get Appraisal as per the expectation.

- Incentives for Extra Work Time

All the IT companies work on so crunch time that there is limited scope for the companies and the employee to save time. But this takes toll on the employee mental stamina and so if the company can come up by curbing late working of the employee during less work pressure and at the time of pressure delivery of the product give them the confidence that working late will help them by giving **incentives**.

- Good Appraisal

This forms the backbone of any employee working in the organization. If the employee is not satisfied with appraisal it creates a element of uncertainty in the mind and he will try to search for new job which can satisfy the **monetary** issue.

- Satisfaction

All what humans need is that they should be satisfied with what they are doing. Need to counsel your employee whether they are satisfied with their job by means of surveys etc.

REDUCING ATTRITION BASED ON THE ABOVE INFERENCES

Seven Secrets to Retaining Employees

1. Matching people to positions
2. Providing guidance, education and learning and development opportunities
3. Respecting your employees
4. Keeping them in the loop
5. Recognizing and valuing employees working part-time
6. Treating your employees as an important customer
7. Updating your company policies regarding pay, benefits, schedules, etc.

Applying them at Managers and Professional Employees Level

In order to reflect the employee turnover companies must provide perfect mentoring and interpersonal training to inexperienced managers. This can be achieved by the following:

1. To develop and communicate a strong strategic vision to them
2. Provide relationship coaching and help people develop to their potential
3. Reward managers for their relationship skills - not only on technical know-how and financial results
4. People don't leave jobs, they leave managers! Replace managers who will not develop relationship skills

Applying them at Clerical and Hourly Employees Level

Most employees prefer to know more about their work and understand the importance of their work. The following points may help to employee retention in the company:

1. Giving compliments and expressing thanks cost little and can bring great benefits
2. Help employees know that their opinions are valuable
3. Keep employees informed and not letting them hear important news through rumors
4. Updating employees with latest technical information
5. Addressing staff by their first names to cultivate closeness between management and staff
6. Publicly praising what the employee has accomplished and saying why it was important
7. Criticizing in private about what the employee can do better and explaining how to do it better
8. Creating community with activities such as informal meals or events outside work
9. Involving employees in organizational planning
10. Giving titles that cost little and reminding employees that they are valuable.

CONCLUSION

For the past several years, IT professionals have experienced unprecedented freedom to pick and choose between jobs, but the situation is not same now. The present recession has left scores of IT professionals unemployed or in tight situation. In present circumstances, people prefer to stick to whatever jobs they have now instead of looking for a change. It has become a common practice of companies announcing and charting out ways to cut costs, and in that respect jobs are among the first things to face the axe. Considering the global market conditions and the persistence of uncertainty, the volume growth within the corporations is expected to remain bleak for the next few quarters. Firms have become extra cautious when it comes to hiring or retaining employees. There have been a number of instances where the joining dates of new recruits have been either postponed or the recruitment been cancelled. Even certain companies have pruned their employees and some are in the process of doing so.

The fall in attrition rate is directly related to the paucity of opportunities and a general slowdown in employment rate within the industry. Many companies across sectors including industry majors have put a break on their recruiting process in an effort to fight out the economic crisis. The corporations are definitely feeling the heat, and amidst uncertainty, they are treading cautiously and hence have deferred almost all of their recruitment decisions to a later date. By adding manpower, companies don't want to increase their cost. As a result, the job opportunities have reduced drastically, as the companies are not in a mood for expansion.

In view of the suggestions by various experts, we continue to move forward with the hope of giving this issue of **"Work Force Attrition"** a new dimension in the near future.

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